Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev, S. Lalkovski	NDS 112,707 (2011)	1-Aug-2010

Q(β^-)=−2397.4 *22*; S(n)=6737.78 *10*; S(p)=7487.6 *7*; Q(α)=392.4 *13* 2012Wa38
Note: Current evaluation has used the following Q record −2397.5 216737.78 *9* 7486.8 *6* 392.3 *13* 2003Au03.

^{207}Pb Levels

Cross Reference (XREF) Flags

A	^{207}Tl β^- decay	L	^{206}Pb(d,pγ)	W	^{208}Pb(^{20}Ne,^{21}Ne)
B	^{207}Pb IT decay	M	^{208}Pb(p,d),(pol p,d)	X	^{206}Pb(^{118}Sn,^{117}Sn)
C	^{207}Bi ε decay	N	^{208}Pb(d,t),(pol d,t)	Y	^{208}Pb(^{12}C,^{13}C)
D	^{211}Po α decay (0.516 s)	O	^{209}Bi(d,α),(p,^{3}He)	Z	^{208}Pb(^{32}S,^{33}Sγ)
E	^{211}Po α decay (25.2 s)	P	^{208}Pb(^{3}He,α)	Others:	
F	^{206}Pb(n,γ) E=res	Q	Coulomb excitation	AA	^{208}Pb(^{136}Xe,Xγ),(^{208}Pb,Xγ)
G	^{207}Pb(n,n$'\gamma$)	R	^{207}Pb(α,α')	AB	^{238}U(^{206}Pb,Xγ)
H	^{207}Pb(n,n$'$)	S	^{207}Pb(d,d$'$)	AC	Muonic atom
I	^{207}Pb(p,p$'$)	T	^{207}Pb(e,e$'$)	AD	^{209}Bi(μ^-,ν2nγ)
J	^{207}Pb(p,p$'\gamma$) IAR	U	^{207}Pb(γ,γ'),(pol γ,γ')	AE	^{209}Bi(π^-,2nγ)
K	^{206}Pb(d,p)	V	^{208}Pb(γ,n)		

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	1/2$^-$	stable	ABCDEFGHIJKLMNOPQRSTUVWXYZ	XREF: Others: AA, AB, AC, AD, AE J$^\pi$: Optical spectroscopy (1931Mu02,1932Ko01), NMR (1950Pr51, see also 1976Fu06), Atomic and Molecular beams (1970Lu05); L(d,p),(p,d),(d,t), (^{3}He,α)=1. μ: +0.592583 *9* (1971Lu06) using NMR technique and 0.58219 *2* (1969Gi04) using optical pumping with radioactive detection technique. Both values include a diamagnetic shielding correction, but not corrected chemical shifts. Recommended value in 1998Gu22 is +0.5925 *6*. configuration: $\nu(3p_{1/2})^{-1}$. Isotope shifts (IS) have been measured and charge distribution deduced from muonic x-rays (1975Ke05; see also 1974Fo09,1973Le16); with optical two-photon spectroscopy (1980Ti04). IS have been measured for K x-rays and compared to theory (1983Bo08,1985Ki03). See also 1991Re08 for a discussion of the relevance to parity conservation. Optical isotope shifts and hyperfine structure (HFS) have been measured with LASER resonance fluorescence from atomic beams (1982Th05,1983Th03,1988Bu20,1992Fe08); Other IS and HFS measurements: 2000Bo54, 2005Wa06, 2005Wa22, 1998Se25, 1998Se22. Charge distribution and isotope shifts have been calculated from electron scattering and muonic x-rays (1978Eu01). Charge density has been deduced from electron scattering (1987Ca02). Isomer shifts in muonic-atoms have been analyzed for the 5/2$^-$, 3/2$^-$, and 7/2$^-$ states in ^{207}Pb (1971Ri14,1983AnZZ).
569.6982 *20*	5/2$^-$	130.5 ps *8*	ABCDEFGHIJKLMNOPQ STUVWXYZ	XREF: Others: AA, AB, AC, AD, AE XREF: K(571)N(575)P(572)S(572)X(571).

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
				Jπ: L(p,p′)=2; L(d,p),L(p,d),L(^{3}He,α),L(d,t)=3; 569.698γ E2 to 1/2$^-$; Atomic and Molecular beams (1961Ax02). $T_{1/2}$: Weighted average of 130.2 ps *15* (1971Ba32), 130.5 ps *15* and 130.7 ps *13* (1977Ku09). Others: 129 ps *3* (1966Ko16), 129 ps *3* (1974Aw01), 128 ps *5* (1966Go35), 134 ps *9* (1964Ro19), 110 ps *11* (1963Le15), 129 ps *3* (1978De14). All values are from ^{207}Bi ε decay. 130 ps *4* from B(E2)↑ in Coulomb Excitation. B(E2)↑: 0.213 *6*, weighted average of 0.0214 *10* (1972Ha59), 0.0210 *15* (1971Gr31) and 0.0213 *9* (1966Ko16) in Coulomb Excitation. μ: +0.80 *3* (1973Ao01) using integral perturbed angular correlation technique. configuration: $\nu(2f_{5/2})^{-1}$.
897.698 *17*	3/2$^-$	0.115 ps *15*	A CDE GHIJKLMNOPQ STUVW YZ	XREF: Others: AC, AD, AE Jπ: L(d,p),L(p,d),L(^{3}He,α),L(d,t)=1; 897.77γ M1+E2 to 1/2$^-$. $T_{1/2}$: Weighted average of 0.104 ps *21* (1973Do20), 0.132 ps *28*, (1972Ha59), and 0.118 ps *35* (1971Gr31), all from DSAM in Coulomb excitation. B(E2)↑: 0.0121 *5* (1972Ha59) and 0.0124 *10* (1971Gr31) in Coulomb Excitation. configuration: $\nu(3p_{3/2})^{-1}$.
1633.356 *4*	13/2$^+$	0.806 s *5*	BCDE GHI KLMNOP ST W Y	XREF: Others: AA, AD, AE %IT=100 Jπ: L(d,t),(p,d),(^{3}He,α)=6; 1063.656γ M4+E5 to 5/2$^-$. $T_{1/2}$: Weighted average of 0.81 s *4*, 0.775 s *38* (1986Al11), 0.810 s *8* (1973Sa22), 0.80 s *1* (1971Sc38), 0.77 s *3* (1971Gl09), 0.81 s *2* (1961Gl16), 0.84 s *2* (1956Ca50), 0.799 s *13* (1955Be24), 0.80 s *2* (1952Ho41), 0.82 s *2* (1951La18). Others: 0.743 s *22* (1967Yu01), 0.797 s (1958Fa08), 0.948 s *14* (1956Ve10), 0.8 s *1* (1954Re33), 0.88 s *10* (1953Fr17). All data are from ^{207}Pb IT decay. configuration: 96%$\nu(1i_{13/2})^{-1}\otimes 0^+$ and 4%$\nu(2f_{7/2})^{-1}\otimes 3^-$ (2000Re12).
2339.921 *8*	7/2$^-$		C GHI KLMNOPQ ST W YZ	XREF: Others: AA, AB, AD, AE Jπ: L(d,t),(p,d),(^{3}He,α)=3; 1770.228γ M1+E2 to 5/2$^-$; 1442.2γ E2 to 3/2$^-$. configuration: 83%$\nu(2f_{7/2})^{-1}\otimes 0^+$ and 17%$\nu(1i_{13/2})^{-1}\otimes 3^-$ (2000Re12).
2623.871 *14*	5/2$^+$	0.09 ps *4*	GHI KLMNO QRST	XREF: Others: AC, AD XREF: R(2600). Jπ: L(p,p′),(α,α′)=3; 1726.23γ (E1) to 3/2$^-$; 2054.29γ (E1) to 5/2$^-$. $T_{1/2}$: From DSAM in 1972Ha59 (Coulomb excitation). Other: 0.17 ps *14* in 1971Gr31 (Coulomb excitation). B(E3)↑: 0.23 *3* (1972Ha59) and 0.19 *2* (1971Gr31) in Coulomb excitation. configuration: $\nu(3d_{5/2})^{-1}$ (1983Ba44); Also: member of the $\nu(3p_{1/2})^{-1}\otimes 3^-_1$(^{208}Pb) doublet (1975Wa03).
2662.476 *13*	7/2$^+$	0.66 ps *11*	GHI KL N PQ ST	XREF: Others: AA, AC, AD

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
				XREF: P(2664). Jπ: L(p,p′)=3. E3+M4 excitation in (e,e′). $T_{1/2}$: From weighted average of 0.65 ps *20* using DSAM (1972Ha59) in Coulomb excitation and 0.66 ps *14* in ^{207}Pb(n,n′γ). Other: >0.41 ps (1971Gr31). B(E3)↑: 0.29 *2* (1972Ha59) and 0.26 *3* (1971Gr31) in Coulomb excitation. configuration: member of the $\nu(3p_{1/2})^{-1}\otimes 3^-_1(^{208}Pb)$ doublet (1975Wa03).
2702[‡] *5*	7/2+,9/2+		I M P S	XREF: M(2707)P(2704)S(2705). Jπ: L(^{3}He,α)=4; L(p,d)=(4).
2727.892 *11*	9/2+		GHI KLMN P ST X	XREF: Others: AD Jπ: L(p,p′)=5; L(d,p),(d,t),(p,d)=4; 388.24γ (E1) to 7/2−; 1094.77γ E2 to 13/2+. configuration: Dominant $\nu(2g_{9/2})^{-1}$ (1983Ba44).
2902[#] *12*			S	
2909?[#] *12*			S	
3004?[#] *12*			S	
3057?[#] *12*			S	E(level): Possible a doublet.
3175.674 *13*	9/2(+)	>402[d] fs	G	Jπ: 447.81γ (M1) to 9/2+; 835.73γ (E1) to 7/2−; 1542.32γ (E2) to 13/2+. $T_{1/2}$: Other: >416 fs in 1998Ye02. configuration: Probable member of the $\nu(2f_{5/2})^{-1}\otimes 3^-$ sextuplet.
3181.490 *23*	1/2,3/2	37[d] fs *+10−8*	G LMN P S	XREF: M(3190)S(3188). Jπ: 2283.82γ D(+Q) to 3/2−; 2612.6γ to 5/2−; 3181.30γ D(+Q) to 1/2−. configuration: Probable member of the $\nu(2f_{5/2})^{-1}\otimes 3^-$ sextuplet.
3202.702 *25*	5/2	20[d] fs *+6−5*	GHI KL No S	XREF: I(3200)K(3205)N(3203)o(3210)S(3203). Jπ: 2305.03γ D(+Q) to 3/2−, 2632.97γ D to 5/2−. configuration: Probable member of the $\nu(2f_{5/2})^{-1}\otimes 3^-$ sextuplet.
3218.47 *3*	7/2	39[d] fs *+14−10*	G o	XREF: o(3210). Jπ: 2648.75γ D to 5/2−. configuration: Probable member of the $\nu(2f_{5/2})^{-1}\otimes 3^-$ sextuplet.
3225.542 *20*	11/2+	>333[d] fs	GHI K MN P ST	XREF: H(3222)I(3223)K(3226)M(3223)N(3225)P(3215)S(3227)T(3223). Jπ: L(p,p′)=5; L(p,d)=(6); 1592.22γ M1 to 13/2+; 2655.32γ (E3) to 5/2−. configuration: Probable member of the $\nu(2f_{5/2})^{-1}\otimes 3^-$ sextuplet.
3267[#] *13*			S	
3302.85 *4*	1/2+	9.9 fs *5*	G K MN P S U	XREF: M(3290)N(3305)P(3307)S(3311)U(3305). Jπ: L(p,d)=0; L(d,t)=(0); 2405.35γ E1 to

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	J^π	$T_{1/2}$	XREF	Comments
				$3/2^-$; 3302.77γ E1 to $1/2^-$.
				$T_{1/2}$: From $g\Gamma_0^2/\Gamma$ in 2003En07. Others: 11.7 fs *18* (1974Sw05), >2.5 fs (2003En07) in ^{207}Pb(γ,γ') and 8 fs *+4−3* (2007Ka07) in ^{207}Pb(n,n'γ).
				configuration: Probable member of the $\nu(2f_{5/2})^{-1}\otimes 3^-$ sextuplet.
3335[#] *13*			S	
3344[#] *13*			S	
3384.579 *13*	$9/2^+$	>284[d] fs	G I KL RST	XREF: R(3400)S(3388).
				J^π: L(p,p')=(5); E5 excitation in (e,e'); 1751.12γ E2 to $13/2^+$; 1044.71γ E1 to $7/2^-$.
3414.20 *4*	3/2,5/2,7/2	38[d] fs *+19−12*	G	J^π: 2844.48γ D(+Q) to $5/2^-$.
3415.480 *17*	$9/2^-$	0.16[d] ps *+58−8*	G I KLMN P ST W	XREF: I(3413)K(3419)M(3400)S(3418)T(3413)W(3410).
				J^π: L(p,p')=4; L(p,d),(d,t),(^{3}He,α)=5; 752.92γ E1 to $7/2^+$; 1075.63γ M1+E2 to $7/2^-$.
				configuration: Probable $\nu(1h_{9/2})^{-1}$ configuration from (d,t) and (^{3}He,α).
3429.843 *18*	$(9/2^+)$	>437[d] fs	G I K O ST	J^π: L(p,p')=(5). (pol p,p') IAR consistent with $9/2^+$, but not with $11/2^+$. 701.88γ d,Q to $9/2^+$; 1796.51γ to $13/2^+$.
				configuration: $\nu(2g_{9/2})^{-1}$ (1983Ba44).
3450?			H	E(level): From ^{207}Pb(n,n').
3476.364 *13*	$9/2^{(+)}$	>388[d] fs	G I KL N P S	XREF: N(3479)P(3467)S(3478).
				E(level): Population in (d,t),(pol d,t) is questionable.
				J^π: L(p,p')=(5); L(d,p)=1,4; 748.40γ D to $9/2^+$; 1136.42γ D to $7/2^-$; 1843.09γ Q to $13/2^+$.
3509.849 *16*	$11/2^+$	>208[d] fs	G I K ST X	XREF: K(3511)S(3512)X(3510).
				J^π: L(d,p)=6; L(p,p')=(5); E5+M6 excitation in (e,e'); 782.00γ M1 to $9/2^+$; 1876.44γ (M1) to $13/2^+$.
				configuration: $\nu(1i_{11/2})^{-1}$ (1983Ba44).
3524.026 *21*	5/2,7/2	0.16[d] ps *+17−6*	G L N	XREF: N(3521).
				J^π: 861.57γ Q,D to $7/2^+$; 2954.21γ D to $5/2^-$.
3582.04 *3*	$1/2^+$,3/2,5/2	10[d] fs *3*	G n P s	XREF: n(3585)s(3585).
				J^π: 958.6γ Q,D to $5/2^+$; 2684.28γ D to $3/2^-$; 3012.32γ Q,D to $5/2^-$.
3584.150 *15*	$9/2^{(+)}$	0.11[d] ps *+8−3*	G I Mn P sT	XREF: I(3583)M(3580)n(3585)s(3585)T(3583).
				J^π: L(p,p')=5. E5 excitation in (e,e'); 921.66γ D to $7/2^+$; 1244.33γ D to $7/2^-$; 1950.79γ Q,d to $13/2^+$. Note, that L=5 in ^{208}Pb(p,d),(pol p,d) would favour $9/2^-$ assignment.
				configuration: Member of the $\nu(3p_{1/2})^{-1}\otimes 5_2^-(^{208}\text{Pb})$ doublet (1975Wa03).

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
3600?			H	E(level): From ^{207}Pb(n,n′).
3620.496 *21*	11/2$^+$	>243[d] fs	G I K ST	XREF: S(3624). Jπ: L(p,p′)=5. (pol p,p′) IAR consistent with 11/2$^+$, not 9/2$^+$; 1987.13γ M1+E2 to 13/2$^+$. configuration: $\nu(1i_{11/2})^{-1}$ (1983Ba44); Also: member of the $\nu(3p_{1/2})^{-1}\otimes 5_2^-(^{208}Pb)$ doublet (1975Wa03).
3634.360 *25*	3/2$^+$,5/2$^+$	0.10[d] ps *+6−3*	G I KL n ST	XREF: n(3646)S(3640). Jπ: L(p,p′)=3. L(d,p)=2; 2736.46γ D to 3/2$^-$; 973.0γ to 7/2$^+$. configuration: Dominant $\nu(3d_{5/2})^{-1}$ (1983Ba44).
3650.09 *3*	9/2$^-$,11/2$^-$	>312[d] fs	G I Mn P ST	XREF: M(3640)n(3646)P(3660)S(3654). Jπ: L(p,d)=(5); L(p,p′)≈9; 2016.72γ to 13/2$^+$.
3673.82 *3*	9/2,11/2	>263[d] fs	G I K S	XREF: K(3675)S(3671). E(level): Questionable population in (d,d′) and (d,p). Jπ: 2040.45γ to 13/2$^+$.
3682[#] *15*			S	
3711.40 *3*	(7/2$^+$)	>118[d] fs	G I L O R	XREF: I(3709)O(3700)R(3700). Jπ: L(α,α′)=5; 1048.90γ Q,D to 7/2$^+$; 1087.58γ D to 5/2$^+$; 3141.20γ D to 5/2$^-$.
3726.094 *22*	(5/2$^+$,7/2$^+$)	>201[d] fs	G I K N T	XREF: K(3724)N(3727). Jπ: L(d,p)=2,3 consistent with J^π=3/2$^+$,5/2,7/2$^-$; IAR consistent with 5/2$^+$, not with 9/2$^+$, but fits to other J^π not attempted. 998.20γ Q to 9/2+1386.16γ D to 7/2$^-$. Note that J^π=(9/2$^+$,11/2$^+$) from (E5) in (e,e′). configuration: Dominant $\nu(3d_{5/2})^{-1}$ (1983Ba44).
3776?			H S	XREF: S(3777). E(level): From ^{207}Pb(n,n′).
3803[#] *15*			S	
3828.997 *18*	9/2$^+$,11/2$^+$	>111[d] fs	G I ST	XREF: S(3831). Jπ: L(p,p′)=5; E(5) in (e,e′); 444.31γ and 1101.21γ (M1+E2) to 9/2$^+$.
3857?	13/2,15/2,17/2		G I N S	XREF: N(3861)S(3865). E(level): Questionable population in (d,d′), (d,t),(pol d,t) and (n,n′γ). Jπ: L(p,p′)=7,8; 2225.0γ to 13/2$^+$.
3869.37 *5*	9/2$^+$,11/2$^+$,13/2$^+$	>104[d] fs	G I sT	XREF: s(3873). Jπ: L(p,p′)=(5); E5 excitation in (e,e′) 2236.00γ Q,d to 13/2$^+$.
3877.31 *10*	(3/2$^+$,5/2$^+$)		L P s	XREF: P(3870)s(3873). Jπ: L(^{3}He,α)=(2); 2979.7γ to 3/2$^-$, 3303.4γ to 5/2$^-$ and 3875.7γ to 1/2$^-$.
3887.70 *19*	(1/2,3/2,5/2)		i L no	XREF: i(3887)n(3894)o(3890).

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
				Jπ: 3317.9γ to 5/2⁻, 3888.1γ to 1/2⁻.
3888.30 *3*	(9/2,11/2)	0.12[d] ps *+20−6*	G i no	XREF: i(3887)n(3894)o(3890). Jπ: 1225.97γ Q to 7/2⁺, 2255.38γ D,Q to 13/2⁺, 3318.16γ to 5/2⁻.
3901.0	13/2,15/2,17/2		G i k m sT	XREF: i(3901)k(3901)m(3910)s(3907) . E(level): Questionable population in (n,n′γ), (d,p) and (d,t),(pol d,t). Jπ: L(p,p′)=7,8; 2267.7γ to 13/2⁺.
3903.33 *10*	(13/2⁺)	>17[d] fs	G i k m sT	XREF: i(3901)k(3901)m(3910)s(3907) . E(level): Questionable population in (d,p) and (d,t),(pol d,t). Jπ: L(p,p′)=7,8; 1175.43γ Q to 9/2⁺.
3928.9 *10*	3/2⁻	1.01[e] fs *6*	G I N S U	XREF: I(3925)N(3932)S(3948). Jπ: 3928.9γ M1+E2 to 1/2⁻ in ^{207}Pb(γ,γ′),(pol γ,γ′).
3986[‡] *2*			I T	
3999.762 *25*	(5/2⁺)	0.08[d] ps *+8−3*	G I KL S	XREF: S(4005). E(level): Population in (d,d′) is questionable. Jπ: L(d,p)=2,3. (pol p,p′) IAR consistent with 5/2⁺, but not with 9/2⁺; 1375.89γ Q,D to 5/2⁺. configuration: Dominant $\nu(3d_{5/2})^{-1}$ (1983Ba44).
4017[‡] *3*			I s	XREF: s(4028).
4034[‡] *5*	(5/2⁺,7/2⁺)		I sT	XREF: s(4028). Jπ: L(p,p′)=3.
4064.02 *8*	(9/2⁺,11/2⁺,13/2⁺)	>37[d] fs	G I K	XREF: I(4062)K(4066). Jπ: 1336.12γ Q,d to 9/2⁺.
4088.38 *20*	3/2⁻,5/2⁻		G I L R	XREF: R(4080). Jπ: L(α,α′)=2; 3518.6γ to 5/2⁻.
4103.8 *5*	3/2⁻	0.27[e] fs *2*	G IJ M STU	XREF: J(4100)M(4100)S(4109). Jπ: L(p,p′)=2; E2 excitation in (e,e′); 4103.8γ M1+E2 to 1/2⁻. configuration: Member of the $\nu(3p_{1/2})^{-1}\otimes 2_1^+(^{208}Pb)$ doublet (1975Wa03).
4116.13 *15*	(1/2,3/2,5/2)		L n p	XREF: n(4110)p(4118). Jπ: 3218.1γ to 3/2⁻, 4116.4γ to 1/2⁻.
4118.4[@] *10*	(15/2⁻)		I K n p X	XREF: Others: AA XREF: n(4110)p(4118)X(4110)AA(4118). Jπ: L=(7), S in (d,p). Consistent with 15/2⁻ in (pol p,p′) IAR. Note that J^π=19/2⁻ at 4118 keV has been assigned by 2000Re12 in ^{208}Pb(^{136}Xe,Xγ),(^{208}Pb,Xγ) with configuration=94%$\nu(1i_{13/2})^{-1}\otimes 3^-$ and 6%$\nu(1f_{7/2})^{-1}\otimes(3^-)^2$. configuration: $\nu(1j_{15/2})^{-1}$ (1983Ba44).

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
4127.9 *10*			GH N	XREF: N(4134).
4140.7 *5*	$(5/2)^-$	0.98[e] fs *8*	G IJ NOP STU	XREF: I(4140)J(4140)N(4134)O(4160)P(4148)S(4145)T(4140). Jπ: L(p,p′)=2. E2 excitation in (e,e′). $T_{1/2}$: From B(E2)↑=0.142 *12* (2003En07). Other: 0.99 fs *11* (1974Sw05). Note that 2003En07 gives $T_{1/2}$=0.35 fs *6* in Table 7. configuration: member of the $\nu(3p_{1/2})^{-1}\otimes 2^+_1(^{208}Pb)$ doublet (1975Wa03, 1974Sw05).
4192.3 *10*	$(11/2^+)$		G I K M P S	XREF: I(4190)K(4201)M(4200)P(4189)S(4193). Jπ: L(p,p′)=6,7; L(p,d)=(6); 3622.6γ to $5/2^-$ most likely being E3.
4213‡ *3*	$(11/2)^+$		I K MN P ST	XREF: I(4213)K(4201)M(4200)N(4214)P(4210)S(4222)T(4213). Jπ: L(p,p′)=5; L(^{3}He,α)=6; E(5) excitation in (e,e′). L(p,d)=(6) for E=4200 keV *20*.
4232‡ *5*			I P	
4250‡ *4*			I	
4270‡ *4*	$(11/2^-,13/2^-)$		I p	XREF: p(4279). Jπ: L(p,p′)=(6).
4287‡ *6*	$7/2^-,9/2^-$		I M p R	XREF: M(4290)p(4279)R(4270). Jπ: L(p,p′)=4; L(α,α′)=4.
4313‡ *4*	$7/2^-,9/2^-$		I N P T	XREF: N(4312)P(4311). Jπ: L(p,p′)=4. E4 excitation in (e,e′). configuration: member of the $\nu(3p_{1/2})^-\otimes 4^+_1(^{208}Pb)$ doublet. No experimental evidences for a doublet structure has been found in 1975Wa03. However, the strength of the transition is observed to be similar to the core excitation from where authors deduce a possible doublet structure.
4318.63 *5*	$5/2^+$		I KL O S	XREF: I(4319)K(4319)O(4330)S(4323). Jπ: L(d,p)=2. Consistent with $5/2^+$ in (pol p,p′) IAR; 3420.5γ to $3/2^-$, 1591.6γ to $9/2^+$. configuration: Dominant $\nu(3d_{5/2})^{-1}$ (1983Ba44).
4342‡ *6*	$(5/2^+,7/2^+)$		I K P	XREF: K(4353)P(4336). Jπ: L(p,p′)=(3).
4364‡ *3*	$(11/2)^-$		HI ST	XREF: H(4368)S(4370). Jπ: L(p,p′)=6. E6 excitation in (e,e′). σ(e,e′) favors $11/2^-$. configuration: member of the $\nu(3p_{1/2})^{-1}\otimes 6^+_1(^{208}Pb)$ doublet (1975Wa03).
4388.56 *5*	$5/2^+$		HIJKL No S X	XREF: H(4386)I(4387)J(4390)K(4389)N(4387)o(4400)S(4398)X(4390). E(level): Population in (d,t),(pol d,t) is questionable. Jπ: L(d,p)=2. *3490*.7γ to $3/2^-$; 1660.9γ to $9/2^+$. configuration: Dominant $\nu(3d_{5/2})^{-1}$ (1983Ba44).
4404‡ *3*	$13/2^-$		I o ST	XREF: o(4400)S(4409). Jπ: L(p,p′)=6. E6 excitation in (e,e′). σ(e,e′) favors $13/2^-$. configuration: member of the $\nu(3p_{1/2})^{-1}\otimes 6^+_1(^{208}Pb)$ doublet (1975Wa03).
4422‡ *3*	$(3/2^-,5/2^-)$		I ST	XREF: S(4433).

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
				Jπ: L(p,p′)=(2). E(level): Population in (d,d′) is questionable.
4465[‡] *5*			I K T	XREF: K(4460). Population in (d,p) is questionable.
4479? *4*			G I s	XREF: s(4493). E(level): Population in (n,n′γ) and (d,d′) is questionable.
4494[‡] *5*	(15/2⁻,17/2⁻)		I s	XREF: s(4493). Jπ: L(p,p′)=(8). configuration: member of the $\nu(3p_{1/2})^{-1}\otimes 8^+_1(^{208}Pb)$ doublet (1975Wa03).
4514.94 *20*	3/2⁺,5/2⁺		I KL	Jπ: L(d,p)=2; 3945.2γ to 5/2⁻.
4527[‡] *4*	(5/2)⁻		I M S	XREF: M(4520)S(4535). E(level): Population in (d,d′) is questionable. Jπ: L(p,p′)=(2). L(p,d)=3. configuration: Probable $\nu(1i_{13/2})^{-1}\otimes 3^-$ configuration from (p,d).
4539.49 *8*	1/2⁺		I KL S	XREF: K(4540)S(4544). Jπ: L(d,p)=0; 3641.8γ to 3/2⁻ and 4539.4γ to 1/2⁻. configuration: Dominant $\nu(4s_{1/2})^{-1}$ (1983Ba44).
4558[‡] *3*	(7/2)⁻		I N P ST	XREF: N(4547)P(4572)S(4566). Jπ: L(d,t)=(3). L=3, S in (^{3}He,α). configuration: Probable (n,2f7/2,−1).
4581.64 *17*	5/2⁺		I KL	Jπ: L(d,p)=2(3). Consistent with 5/2⁺ in (pol p,p′) IAR. 3683.5γ to 3/2⁻. configuration: Dominant $\nu(3d_{5/2})^{-1}$ (1983Ba44).
4592[‡] *6*			I S	XREF: S(4604).
4611.67 *15*	(3/2,5/2)		I KL S	XREF: K(4614)S(4616). Jπ: Tentative assignment based on (pol p,p′) IAR and multiple decay branches in ^{206}Pb(d,pγ).
4627.44 *8*	1/2⁺	0.71[e] fs *8*	IJKL N S U X	XREF: J(4630)K(4629)X(4630). E(level): Population in (d,d′) is questionable. Jπ: L(d,p)=0; 3729.7γ to 3/2⁻, 4627.4γ to 1/2⁻. configuration: Dominant $\nu(4s_{1/2})^{-1}$ (1983Ba44).
4630[‡] *3*	(15/2)⁻		I o sT	XREF: o(4640)s(4636). Jπ: L(p,p′)=(8). E8 excitation in (e,e′), systematics of weak-coupling doublets favors J=15/2. configuration: member of the $\nu(3p_{1/2})^{-1}\otimes 8^+_1(^{208}Pb)$ doublet (1975Wa03).
4641[‡]			I k o s	XREF: k(4653)o(4640)s(4636).
4669.84[‡] *20*	3/2⁻,5/2⁻		I kL	XREF: I(4656)k(4653). Jπ: L=2 in (p,p′); 4100.1γ to 5/2⁻.
4671[‡] *3*	(17/2)⁻		I ST	XREF: S(4680). E(level): Population in (d,d′) is questionable. Jπ: L(p,p′)=(8). E8 excitation in (e,e′). configuration: member of the $\nu(3p_{1/2})^{-1}\otimes 8^+_1(^{208}Pb)$ doublet (1975Wa03).
4697?[#] *19*			S	
4712[&] *10*			K N S	XREF: K(4721)S(4714). E(level): Population in (d,d′) and (d,p) is

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
				questionable.
4733[‡] *3*			I S	XREF: S(4726). E(level): Population in (d,d′) is questionable.
4745[‡] *3*	(19/2)$^-$		I ST	XREF: S(4752). E(level): Population in (d,d′) is questionable. Jπ: E10 excitation in (e,e′). Systematics favors 19/2$^-$. configuration: Possible configuration=((^{208}Pb 10$^+$)(ν 3p$_{1/2}$)$^{-1}$).
4761[‡] *4*	(11/2$^+$,13/2$^+$)		I MN P S	XREF: M(4765)P(4765)S(4769). E(level): Population in (d,d′) is questionable. Jπ: L(p,d)=(6). L(^{3}He,α)=(3) (1978Ga23) and L(^{3}He,α)=6 (1980Gu03). configuration: Suggested as a possible i13/2 state by 1978Ga23 and 1980Gu03.
4765[a] *10*	(5/2$^-$,7/2$^-$)		P	Jπ: L(^{3}He,α)=(3) (1978Ga23).
4785[‡] *4*	≥13/2		I K S	Jπ: L(p,p′)>6.
4806[‡] *5*			I K RST	XREF: K(4800)R(4800)S(4813)T(4806). E(level): Population in (d,d′) is questionable.
4832.90 *20*	3/2$^+$,5/2$^+$		I KL ST	XREF: I(4835)K(4838)S(4840)T(4835). E(level): Population in (d,d′) is questionable. Jπ: L(d,p)=2; 4263.2γ to 5/2$^-$.
4870[‡] *4*	(7/2$^+$)		Ij o St	XREF: j(4870)o(4860)S(4854)t(4870). Jπ: L(d,p)=2,3,4 (1970Mo21). In (pol p,p′) IAR, 7/2$^+$ gives a better fit than 3/2$^+$ or 5/2$^+$. configuration: ν(2g$_{7/2}$)$^{-1}$ (1983Ba44).
4871.7 *3*	(1/2,3/2)		jKL o tU	XREF: j(4870)K(4874)o(4860)t(4870). Jπ: 4871.6γ D to 1/2$^-$; L(d,p)=2 (1970JoZS).
4884[‡] *3*	19/2$^-$,21/2$^-$		I ST	XREF: S(4880). Jπ: E10 excitation in (e,e′).
4921[‡] *4*			I ST	XREF: S(4897).
4943[‡] *4*			I S	XREF: S(4930).
4957[‡] *4*	19/2$^-$,21/2$^-$		I k sT	XREF: k(4965)s(4965). Jπ: E10 excitation in (e,e′).
4975[‡] *6*			IJk s	XREF: J(4980)k(4965)s(4965).
4980.5 *3*	1/2$^+$	0.099[e] fs *13*	IJK N U	XREF: I(4985)K(4983)N(4977). Jπ: J=1/2,3/2 from $\gamma(\theta,\phi)$ in 2009Pi14 and strength in (γ,γ′). (pol p,p′) IAR consistent with 1/2$^+$. L(d,p)=2 (1970JoZS), 0 (1970Mo21) suggests doublet in (d,p); 4980.4γ E1 to 1/2$^-$. configuration: Dominant ν(4s$_{1/2}$)$^{-1}$ (1983Ba44).
4987[‡] *5*	5/2$^+$,7/2$^+$		I ST	XREF: S(4991). Jπ: L(p,p′)=3.
5018[‡] *5*	(17/2$^+$,19/2$^+$)		I s	XREF: s(5027). E(level): Population in (d,d′) is questionable. Jπ: L(p,p′)≈9.
5039[‡] *5*			I sT	XREF: s(5027). E(level): Population in (d,d′) is questionable. Jπ: L(p,p′)≈9.
5053[‡] *5*	(7/2$^+$)		I K M S	XREF: M(5060)S(5060). Jπ: 7/2$^+$ gives best fit in (pol p,p′) IAR, but

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	J^π	XREF	Comments
			$3/2^+$ cannot be ruled out. L(d,p)=2,3,4. configuration: Dominant $\nu(2g_{7/2})^{-1}$ (1983Ba44).
5072[‡]	$(3/2^+)$	I K	J^π: $3/2^+$ gives best fit in (pol p,p′) IAR, but $7/2^+$ cannot be ruled out. configuration: Dominant $\nu(3d_{3/2})^{-1}$ (1983Ba44).
5080[‡]	$(3/2)^+$	I K t	XREF: K(5079)t(5081). J^π: L(d,p)=2,3,4. *3*/2^+ preferred in (pol p,p′) IAR. configuration: Dominant $\nu(3d_{3/2})^{-1}$ (1983Ba44).
5081[‡] *4*	$(5/2^+,7/2^+)$	I MN St	XREF: M(5080)N(5094)S(5092)t(5081). E(level): Population in (d,t) is questionable. J^π: L(p,p′)=3, but L(p,d)=(5) would lead to $J^\pi=9/2^-,11/2^-$ assignment.
5117[‡] *6*		I N	XREF: N(5115).
5129.47 *9*	$(3/2)^+$	I L o s	XREF: o(5140)s(5135). E(level): Population in (^{3}He,α) is questionable. J^π: L(d,p)=2 (1970JoZS), 4 (1970Mo21). $3/2^+$ favored in (pol p,p′) IAR. 4559.7γ to $5/2^-$, 5129.4γ to $1/2^-$. configuration: Dominant $\nu(3d_{3/2})^{-1}$ (1983Ba44).
5130[a] *10*	$(7/2^+,9/2^+)$	K oP s	XREF: o(5140)s(5135). J^π: L(d,p)=4. L(^{3}He,α)=5+3,6 suggests that the (^{3}He,α) reaction is populating a level different from the 5129.
5156[‡] *6*	$(5/2^+,7/2^+)$	A	J^π: L(p,p′)=(3).
5180.19 *7*	$7/2^+$	I KL n ST	XREF: I(5177)K(5179)n(5186)S(5183)T(5177). E(level): Population in (d,d′) is questionable. J^π: L(p,p′)=3. Consistent with $7/2^+$, but not with $5/2^+$ in (pol p,p′) IAR. L(d,p)=0+4 (1970JoZS), 2 (1970Mo21) suggests possible doublet in (d,p). 2451.7γ to $9/2^+$, 1542.1γ to $5/2^+$. configuration: Dominant $\nu(2g_{7/2})^{-1}$ (1983Ba44).
5193[‡] *5*		I nO rST	XREF: n(5186)O(5190)r(5200)S(5189).
5204.98 *10*	$(5/2^+,7/2^+)$	I KL r	XREF: K(5206)r(5200). J^π: 2476.8γ to $9/2^+$, 2542.5γ to $7/2^+$; $J^\pi=3/2^+$ in (p,p′).
5217[b]	$19/2^-,21/2^-$	T	J^π: E10 excitation in (e,e′).
5217.58 *9*	$3/2^+$	IJKL S	XREF: K(5215). E(level): Population in (d,d′) is questionable. J^π: L(d,p)=2. Strongly enhanced on d3/2 IAR in (p,p′γ) IAR. Consistent with $3/2^+$ in (pol p,p′) IAR; 4647.6γ to $5/2^-$, 5217.6γ to $1/2^-$. configuration: Dominant $\nu(3d_{3/2})^{-1}$ (1983Ba44).
5247[‡] *7*	$5/2^+,7/2^+$	I n S	XREF: n(5253). E(level): Population in (d,d′) is questionable. J^π: L(p,p′)=3.
5267[‡] *5*	$(7/2)^+$	I n sT	XREF: n(5253)s(5279). J^π: L(p,p′)=3. E3 excitation in (e,e′). (pol p,p′) IAR consistent with $7/2^+$, but no fit attempted for $5/2^+$. configuration: Dominant $\nu(2g_{7/2})^{-1}$ (1983Ba44).
5290[‡] *5*	$3/2^+,5/2^+$	I K M s	XREF: K(5285)s(5279). J^π: L(p,d)=2. configuration: Probable $\nu(2f_{7/2})^{-1}\otimes 3^-$ or $\nu(1h_{9/2})^{-1}\otimes 3^-$ configuration from (p,d).
5309.93 *15*	$(7/2^+)$	I L S	XREF: S(5305). J^π: From σ and analyzing power fits in (p,p′) (1983Ba44); 2581.9γ to $9/2^+$, 4740.3γ to $5/2^-$. configuration: Dominant $\nu(2g_{7/2})^{-1}$ (1983Ba44).

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
5321[‡] *5*	$(7/2)^+$		I K n S	XREF: K(5319)n(5330)S(5325). Jπ: L(p,p′)=3; L(d,p)=4,2. (pol p,p′) IAR consistent with $7/2^+$.
5336.9 *5*	$5/2^+,7/2^+$		I L n ST	XREF: n(5330)S(5332). Jπ: L(p,p′)=3. *2674.4*γ to $7/2^+$.
5352[‡] *5*	$5/2^+,7/2^+$		I K M ST	XREF: K(5358)M(5360)S(5349). E(level): Population in (d,d′) and (d,p) is questionable. Jπ: L(p,p′)=3.
5369[‡] *5*			I K S	XREF: K(5371)S(5363). Jπ: L(p,p′)=(6); however, $(7/2^+)$ is favored by (pol p,p′) IAR, which gives a poor fit for $11/2^-$.
5383[‡] *5*	$(9/2^-,11/2^-)$		I M S	XREF: M(5390)S(5379). Jπ: L(p,d)=(5).
5402[‡] *6*	$(9/2)^-$		I N P S	XREF: N(5418)P(5410)S(5413). E(level): Population in (d,d′) is questionable. Jπ: L(^{3}He,α)=5; L(p,d), (pol p,d)=(5). configuration: Dominant $\nu(1h_{9/2})^{-1}$ configuration in (^{3}He,α).
5429.46 *20*	$(7/2)^+$		I KL	XREF: K(5424). Jπ: L(p,p′)=3. $7/2^+$ consistent with (pol p,p′) IAR. L(d,p)=2,4; 4859.7γ to $5/2^-$. configuration: Dominant $\nu(2g_{7/2})^{-1}$ (1983Ba44).
5440[‡] *5*	$5/2^+,7/2^+$		I ST	Jπ: L(p,p′)=3.
5447?[#] *22*			S	
5454[‡] *5*			I S	
5474[‡] *4*	$(5/2^-,7/2^-)$		I M T	XREF: M(5470). Jπ: L(p,d), (pol p,d)=(3).
5489.77 *22*	$3/2^+$	0.064[e] fs *16*	I K U	XREF: K(5494). Jπ: level excited in (γ,γ′). (pol p,p′) IAR gives tentative $3/2^+$. 4920.0γ E1 to $5/2^-$, 5489.7γ E1 to $1/2^-$. configuration: 4.7% $(\nu 3p_{1/2})\otimes 1^-_1]_{3/2+}$ and 38.8% $[(\nu 3p_{1/2})\otimes 1^-_2]_{3/2+}$.
5501.96 *20*	$7/2^-,9/2^-$		IJ L R T	XREF: I(5501)J(5500)R(5500)T(5501). Jπ: L(p,p′)=4; 4932.2γ to $5/2^-$.
5514[#] *22*			S	
5526[‡] *4*	$(13/2^+,15/2^+)$		I NO S	XREF: N(5527)O(5530)S(5526). Jπ: L(p,p′)=(7).
5537[‡] *5*			I	
5548[‡] *6*			I T	
5573.14 *19*	$(5/2)^+$		I KL T	XREF: I(5569)K(5576)T(5569). Jπ: L(p,p′)=3.(pol p,p′) IAR consistent with $3/2^+$ not with $7/2^+$, but $5/2^+$ fit not attempted. 5003.2γ to $5/2^-$, 5574.2γ to $1/2^-$.
5584[‡] *4*			I S	XREF: S(5588).
5597.5 *3*	$1/2^{(+)}$	0.038 fs *4*	IJ M U	XREF: I(5598)J(5600)M(5600). Jπ: 5591.4 (E1) to $1/2^-$; excitation in ^{207}Pb(γ,γ′),(pol γ,γ′).

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
				configuration: 3.4% ($\nu 4s_{1/2}$), 40.9% $[(\nu 3p_{1/2})\otimes 1^-_1]_{1/2+}$ and 34.3% $[(\nu 3p_{1/2})\otimes 1^-_2]_{1/2+}$.
5611? *2*	(3/2$^+$)	0.17 fs *3*	n tU	XREF: n(5611)t(5614). E(level): Population in (d,t),(pol d,t) is questionable. Jπ: 5611γ E1 to 1/2$^-$; excitation in ^{207}Pb(γ,γ′),(pol γ,γ′).
5614[‡] *6*	(7/2$^+$)		I n t	XREF: n(5611)t(5614). E(level): Population in (d,t),(pol d,t) is questionable. Jπ: L(p,p′)=(3). (pol p,p′) IAR consistent with 7/2$^+$, but fit to 5/2$^+$ not attempted. configuration: Dominant $\nu(2g_{7/2})^{-1}$ (1983Ba44).
5620[a] *10*	(9/2)$^-$		K P	Jπ: L(^{3}He,α)=5. configuration; Possible configuration=$(\nu\ 1h_{9/2})^{-1}$.
5648[‡] *6*			I	
5668[‡] *5*			I	
5690.1 *16*	(3/2$^+$)		IjK M tU	XREF: I(5689)j(5700)K(5693)T(5689). Jπ: L(d,p)=(2,4). Excited in (γ,γ′). 3/2$^+$ consistent with (pol p,p′) IAR. 5690.0γ to 1/2$^-$. configuration: Dominant $\nu(3d_{3/2})^{-1}$ (1983Ba44).
5702[‡] *6*			Ij	XREF: j(5700).
5715.7 *4*	(1/2,3/2)		tU	XREF: T(5720). Jπ: Excited in (γ,γ′). 5715.6γ to 1/2$^-$.
5734.1 *20*	(1/2,3/2)		I U	Jπ: Excited in (γ,γ′). 5734γ to 1/2$^-$.
5765[‡] *7*			I	
5794 *4*	(1/2,3/2)		tU	XREF: T(5786). Jπ: Excited in (γ,γ′). 5794γ to 1/2$^-$.
5803[‡] *6*			I O R	XREF: O(5810)R(5800).
5824.5 *3*			I L	XREF: I(5822).
5840[‡] *6*			I t	
5868[‡] *6*			I	
5897[‡] *7*			IJ t	XREF: J(5900).
5915[‡] *8*			I t	
5934[‡] *7*			I	
5952[‡] *5*			I t	
5959[‡] *6*			I t	
5998[‡] *6*	(13/2)$^+$		I P t	XREF: P(5990). Jπ: L(^{3}He,α)=6. configuration: Probable configuration=$(\nu\ 1i_{13/2})^{-1}$ in (^{3}He,α).
6010[‡] *5*			I	
6031[‡] *6*			I t	
6041[‡] *7*			I	
6064[‡] *7*			I t	
6073[‡] *6*			I	
6090[‡] *7*			I	
6106.58 *20*	(5/2$^+$,7/2$^+$)		I L t	Jπ: L(p,p′)=(3); 5536.8γ to 5/2$^-$.
6146[‡] *5*	(1/2$^+$,3/2$^+$)		IJ t	XREF: J(6150). Jπ: Enhanced on s1/2 resonance in (p,p′γ) IAR

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Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	Jπ	XREF	Comments
			(1981Di08). configuration: Probable configuration=((ν $4s_{1/2}$)(ν $3p_{3/2}$)$^{-1}$(ν $3p_{1/2}$)$^{-1}$) (1981Di08).
6170[‡] *8*	(13/2$^+$,15/2$^+$)	I T	Jπ: L(p,p′)=(7).
6181.1 *7*	1/2,3/2	U	E(level): 6179γ could be interpreted as an inelastic transition from a possible 6749 keV level to the first excited state at 570 keV (1980Ch22). However, this is ruled out in 2003En07. Jπ: Excited in (γ,γ′). 6181.0γ to 1/2$^-$.
6188[‡] *7*	(13/2$^+$,15/2$^+$)	I T	Jπ: L(p,p′)=(7).
6213.9 *3*	(1/2,3/2,5/2)	L	Jπ: 5316.1γ to 3/2$^-$, 6213.8γ to 1/2$^-$.
6228[‡] *7*		I T	
6251[‡] *6*		I	
6262[‡] *6*		I T	
6276[‡] *6*	(5/2$^+$,7/2$^+$)	I T	Jπ: L(p,p′)=(3).
6310[‡] *7*		I T	
6332[‡] *7*		I	
6360[‡] *5*	(5/2$^-$,7/2$^-$)	I p T	XREF: p(6370). Jπ: L(^{3}He,α)=(3) for E=6370 keV *10*.
6381[‡] *7*	(5/2$^-$,7/2$^-$)	I p	XREF: p(6370). Jπ: L(^{3}He,α)=(3) for E=6370 keV *10*.
6402[‡] *6*		I T	
6449[‡] *7*	(23/2$^+$,25/2$^+$)	I T	Jπ: (M12) excitation in (e,e′). configuration: Member of the ν((1$j_{15/2}$)$^{+1}$(1$i_{13/2}$)$^{-1}$)⊗12$^-$(^{208}Pb) multiplet in (e,e′).
6483[‡] *8*	23/2$^+$,25/2$^+$	I T	Jπ: M12 excitation in (e,e′). configuration: Member of the ν((1$j_{15/2}$)$^{+1}$(1$i_{13/2}$)$^{-1}$)⊗12$^-$(^{208}Pb) multiplet in (e,e′).
6542 *4*	(1/2,3/2)	I TU	XREF: I(6547)T(6547). Jπ: Excited in (γ,γ′).
6627[‡] *8*	27/2$^+$,29/2$^+$	I T	Jπ: M14 excitation in (e,e′). configuration: Member of the ν((1$j_{15/2}$)$^{+1}$(1$i_{13/2}$)$^{-1}$)⊗14$^-$(^{208}Pb) multiplet in (e,e′).
6654[‡] *8*		I	
6670[‡] *8*	27/2$^+$,29/2$^+$	I T	Jπ: M14 excitation in (e,e′). configuration: Member of the ν((1$j_{15/2}$)$^{+1}$(1$i_{13/2}$)$^{-1}$)⊗14$^-$(^{208}Pb) multiplet in (e,e′).
6716[‡] *7*		I T	
6735 *4*	(1/2,3/2)	U	Jπ: Excited in (γ,γ′).
6749 *4*	(1/2,3/2)	U	E(level): 6179γ is interpreted as an inelastic transition to 570 keV level (1980Ch22). However, this is ruled out in 2003En07.
6762[‡] *7*		I m T	XREF: m(6780).
6788[‡] *9*		I m T	XREF: m(6780).
6818 *4*	(1/2,3/2)	U	
≈6826[b]		T	
6864[‡] *8*		I T	
6912[‡] *8*		I T	
6939[‡] *9*		I	
6955[‡] *9*		I	
7010[a] *20*	9/2$^-$,11/2$^-$	P T	XREF: T(6986).

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{207}Pb Levels (continued)

E(level)[†]	Jπ	XREF		Comments
				Jπ: L(^{3}He,α)=5.
7048[‡] *9*	23/2$^+$,25/2$^+$	I	T	Jπ: M12 excitation in (e,e′).
≈7096[b]	23/2$^+$,25/2$^+$		T	Jπ: M12 excitation in (e,e′).
≈7165[b]			T	
≈7283[b]			T	
7306 *4*	(1/2,3/2)		U	Jπ: Excited in (γ,γ′).
7590[a] *20*	9/2$^-$,11/2$^-$	P		Jπ: L(^{3}He,α)=5.
7730[a]	1/2$^+$[c]	P		configuration: Dominant $\nu(3s_{1/2})^{-1}$ in (^{3}He,α).
7960[a] *20*	9/2$^-$,11/2$^-$	P		Jπ: L(^{3}He,α)=5.
8000[a]	7/2$^-$[c]	P		configuration: Dominant $\nu(2f_{7/2})^{-1}$ in (^{3}He,α).
8030[a]	3/2$^+$[c]	P		configuration: Dominant $\nu(2d_{3/2})^{-1}$ in (^{3}He,α).
8220[a] *20*	9/2$^-$,11/2$^-$	P		Jπ: L(^{3}He,α)=5. configuration: Dominant $\nu(1h_{11/2})^{-1}$ in (^{3}He,α).
8540[a] *20*	9/2$^-$,11/2$^-$	P		Jπ: L(^{3}He,α)=5.
9220[a] *20*	9/2$^-$,11/2$^-$	P		Jπ: L(^{3}He,α)=5.
9430[a]	5/2$^+$[c]	P		configuration: Dominant $\nu(2d_{5/2})^{-1}$ configuration in (^{3}He,α).
9600[a] *20*	(9/2$^-$,11/2$^-$)	P		Jπ: L(^{3}He,α)=(5).
11000[a]	7/2$^+$[c]	P		configuration: Dominant $\nu(1g_{7/2})^{-1}$ configuration in (^{3}He,α).
13630[a]	9/2$^+$[c]	P		configuration: Dominant $\nu(1g_{9/2})^{-1}$ configuration in (^{3}He,α).
15230[a]	1/2$^-$[c]	P		configuration: Dominant $\nu(2p_{1/2})^{-1}$ configuration in (^{3}He,α).
16030[a]	3/2$^-$[c]	P		configuration: Dominant $\nu(2p_{3/2})^{-1}$ configuration in (^{3}He,α).
17330[a]	5/2$^-$[c]	P		configuration: Dominant $\nu(1f_{5/2})^{-1}$ configuration in (^{3}He,α).
19301[a] *33*	1/2$^+$	P		E(level),Jπ: Isobaric analog of ^{207}Tl g.s. Γ=350 keV *60* (1978Du13). configuration: $\nu(3s_{1/2})$.
19330[a]	7/2$^-$[c]	P		configuration: $\nu(1f_{7/2})^{-1}$.
19658[a] *24*	3/2$^+$	P		E(level),Jπ: Isobaric analog of the 351 keV level in ^{207}Tl. Γ=350 keV *40* (1978Du13). configuration: $\nu(2d_{3/2})^{-1}$.
20642[a] *27*	11/2$^-$	P		E(level),Jπ: Isobaric analog of the 1348 keV level in ^{207}Tl. Γ=225 keV *40* (1978Du13). configuration: $\nu(1h_{11/2})^{-1}$.
21000[a] *27*	5/2$^+$	P		E(level),Jπ: Isobaric analog of the 1682 keV level in ^{207}Tl. Γ=350 keV *40* (1978Du13). configuration: $\nu(2d_{5/2})^{-1}$.
22890[a] *80*		P		E(level): Possible isobaric analog state.

[†] From a least-squares fit to Eγ, unless otherwise stated.
[‡] From ^{207}Pb(p,p′).
[#] From ^{207}Pb(d,d′).
[@] From ^{206}Pb(d,p).
[&] From ^{208}Pb(d,t),(pol d,t).
[a] From ^{208}Pb(^{3}He,α).
[b] From ^{207}Pb(e,e′).
[c] From 1994So13 in ^{208}Pb(^{3}He,α).
[d] Based on DSAM in ^{207}Pb(n,n′γ) (2000Ka07).
[e] From $g\Gamma_0^2/\Gamma$ in ^{207}Pb(γ,γ′),(pol γ,γ′).

Adopted Levels, Gammas (continued)

$\gamma(^{207}Pb)$

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	δ	α[†]	Comments
569.6982	5/2$^-$	569.698 *2*	100	0.0	1/2$^-$	E2		0.0216	α(K)=0.01583 *23*; α(L)=0.00439 *7*; α(M)=0.001081 *16*; α(N+..)=0.000330 *5* α(N)=0.000274 *4*; α(O)=5.21×10^{-5} *8*; α(P)=4.29×10^{-6} *6* B(E2)(W.u.)=0.972 *6* E_γ: From 2000He14 in ^{207}Bi ε decay. Mult.: From α(K)exp, α(L)exp, α(M)exp and subshell ratios in ^{207}Bi ε decay; $\gamma(\theta)$ in Coulomb excitation (A_2=0.186 *25*; A_4=−0.021 *18* in 1970Kl03) and in ^{207}Pb(n,n′γ) (A_2=+0.18 *3*; A_4=−0.03 *4* in 2000Ka07); K/L=3.58 *5* (1988Fu05), 3.52 *11* (1973Fr15), 3.31 *13* (1974Av03), 3.49 *12* (1969He19), 3.57 (E2 theory). L12/L3=7.4 *4* (1969He19), 7.25 (E2 theory). K:L:M:N+=1000:279 *4*:70 *2*:21.0 *11* (1988Fu05), 1000:302 *12*:86 *6*:18 *2* (1974Av03), 1000 *23*:287 *7*:70 *4*:20.5 *18* (1969He19). α(K)exp=0.0155 *5* (1969He19), 0.0159 *6* (1967Va25), both relative to α(K)(661γ) in ^{137}Ba)=0.0890 *8*. α=0.0219 *3* from (ce)(ce) coin (1968An04). α(K)exp: 0.01572 *23*, weighted average of 0.0156 *7* (1967Kl02), 0.0159 *6* (1967Va25), 0.0160 *10* (1967Se15), 0.0156 *5* (1968An04), 0.0155 *5* (1969He19), 0.0160 *5* [V. Anderson, Riso report 195 (1969)] , and 0.0150 *15* (1969Ba53). Other: 0.0230 *3* (1974Mu16) omitted since it is discrepant. α(L)exp: 0.00452 *6*, weighted average of 0.0049 *3* (1967Se15), 0.0045 *5* (1968An04), 0.00444 *21* (1969He19), 0.0050 *10* (1969Ba53), 0.00483 *18* (1974Av03) and 0.00446 *7* (1988Fu05). α(M)exp: 0.00114 *5*, weighted average of 0.0010 *5* (1967Se15), 0.00138 *10* (1974Av03) and 0.00112 *3* (1988Fu05). α(M+...)exp: 0.00149 *4* weighted average of 0.0017 *5* (1968An04), 0.0017 *4* (1969Ba53), 0.00167 *10* (1974Av03) and 0.00146 *3* (1988Fu05). α(N+...)exp: 0.00029 *3* (1974Av03) and 0.000341 *17* (1988Fu05).
897.698	3/2$^-$	328.10 *12*	0.54 *4*	569.6982	5/2$^-$	[M1]		0.334	α(K)=0.273 *4*; α(L)=0.0466 *7*; α(M)=0.01090 *16*; α(N+..)=0.00338 *5* α(N)=0.00277 *4*; α(O)=0.000552 *8*; α(P)=5.91×10^{-5} *9* B(M1)(W.u.)=0.028 *5* E_γ: From 1988Hi14 in ^{207}Tl β^- decay. I_γ: Weighted average of 0.59 *9* in Coulomb excitation, 0.53 *4* in ^{207}Tl β^- decay and 0.58 *19* in ^{211}Po α decay (0.516 s). Other: 0.40 *10* in ^{207}Pb(n,n′γ). Mult.: See ^{207}Tl β^- decay dataset for details.
		897.77 *12*	100	0.0	1/2$^-$	M1+E2	+0.091 *9*	0.0233	α(K)=0.0192 *3*; α(L)=0.00318 *5*; α(M)=0.000741 *11*; α(N+..)=0.000230 *4* α(N)=0.000188 *3*; α(O)=3.76×10^{-5} *6*; α(P)=4.04×10^{-6} *6*

$^{207}_{82}Pb_{125}$-15

Adopted Levels, Gammas (continued)

$\gamma(^{207}Pb)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	δ	α[†]	Comments
									B(M1)(W.u.)=0.25 *4*; B(E2)(W.u.)=0.92 *22* E_γ: From 1988Hi14 in ^{207}Tl β^- decay. Mult.: From α(K)exp=0.0182 *13*, weighted average of 0.019 *3* (1970AhZX), 0.0181 *25* (1974Av03), 0.016 *3* (1975Ja04), and 0.0190 *23* (1988Fu05) in ^{207}Bi ε decay and 0.016 *3* (1975Ja04) in ^{211}Po α decay (0.516 s). δ: Weighted average of +0.096 *11* (1970Kl03) and +0.075 25 (1972Ha59) in Coul. Ex and +0.075 *25* (1976Av01) and +0.11 *6* (1973Ba38) in ^{207}Bi ε decay. δ=−2.19 *6*, as a second solution in 1970Kl03, would imply almost a pure E2 transition, but this is incompatible with the substantial line Doppler broadening. The sign is from $\gamma\gamma(\theta)$.
1633.356	$13/2^+$	1063.656 *3*	100	569.6982	$5/2^-$	M4+E5	+0.02 *1*	0.1257	α(K)=0.0942 *14*; α(L)=0.0238 *4*; α(M)=0.00589 *9*; α(N+..)=0.00183 *3* α(N)=0.001508 *22*; α(O)=0.000296 *5*; α(P)=2.87×10^{-5} *4* B(M4)(W.u.)=3.124 *20*; B(E5)(W.u.)=1.2 *13* E_γ: From 2000He14 in ^{207}Bi ε decay. Mult.: From α(K)exp, α(L)exp, α(M)exp and subshell ratios in ^{207}Bi ε decay; L12/L3=13 *2*, M/NO=3.3 *5*,and K:L:M+=1000 *20*:267 *8*:83 *4* (1969He19); K/L=3.83 *14* (1973Fr15); K:L:M:N+=4740 *168*:1206 *46*:296 *13*:95 *6* (1988Fu05); K:L:M:N+=4605 *138*:1089 *44*:269 *19*:82 *11* (1974Av03). δ: From $\gamma\gamma(\theta)$ in ^{207}Bi ε decay (1976Av01). α(K)exp: 0.0951 *23*, weighted average of 0.090 *9* (1967Kl02), 0.096 *3* (1969He19), 0.095 *14* (1969Ba53), 0.094 *5* (1974Av03), and 0.095 *11* (1974Mu16). Others: 0.094 *9* [V. Andersen, Riso report 195 (1969)], 0.099 *4* (1988Fu05) and 0.085 *5* (1967Se15). α(L)exp: 0.0247 *6*, weighted average of 0.0233 *15* (1967Se15), 0.0256 *10* (1969He19), 0.030 *5* (1969Ba53), 0.0225 *16* (1974Av03), and 0.0251 *10* (1988Fu05). α(M)exp: 0.0059 *4*, weighted average of 0.0044 *9* (1967Se15), 0.0055 *5* (1974Av03), and 0.0062 *3* (1988Fu05). α(M+...)exp: 0.0105 *17* (1969Ba53). α(N+...)exp: 0.0017 *3* (1974Av03) and 0.00198 *13* (1988Fu05).
2339.921	$7/2^-$	1442.2 *2*	1.91 *3*	897.698	$3/2^-$	E2		0.00337 *5*	α(K)=0.00271 *4*; α(L)=0.000468 *7*; α(M)=0.0001098 *16*; α(N+..)=8.08×10^{-5} *12* α(N)=2.78×10^{-5} *4*; α(O)=5.50×10^{-6} *8*; α(P)=5.60×10^{-7} *8*; α(IPF)=4.69×10^{-5} *7* E_γ,I_γ: From ^{207}Bi ε decay.

$^{207}_{82}Pb_{125}$-16

Adopted Levels, Gammas (continued)

γ(^{207}Pb) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	δ	α[†]	Comments
									Mult.: α(K)exp=0.00244 *13*, α(L)exp=0.00042 *8* and K:L:M+=1000 *50*:157 *15*:44 *7* (1974Av03) in ^{207}Bi ε decay; γ(θ) in ^{207}Pb(n,n′γ) (a_2=+0.35 *8*; a_4=−0.05 *11* (2000Ka07)).
2339.921	7/2−	1770.228 *9*	100.0 *4*	569.6982	5/2−	M1+E2	+0.087 *5*	0.00441 *7*	α(K)=0.00341 *5*; α(L)=0.000554 *8*; α(M)=0.0001290 *18*; α(N+..)=0.000312 *5* α(N)=3.28×10^{-5} *5*; α(O)=6.54×10^{-6} *10*; α(P)=7.06×10^{-7} *10*; α(IPF)=0.000272 *4* E_γ,I_γ: From ^{207}Bi ε decay. Mult.: From α(K)exp, α(L)exp and α(M+)exp and subshell ratios; K:L:M+=1000 *111*:136 *15*:32 *5* (1988Fu05); 1000 *57*:157 *13*:43 *5* (1974Av03). K/L=5.5 *6* (1973Fr15). δ: from γγ(θ) in ^{207}Bi ε decay (1976Av01). α(K)exp: 0.00346 *18*, weighted average of 0.0034 *3* (1971Al03), 0.0030 *5* (1974Av03), and 0.00362 *19* (1988Fu05). α(L)exp: 0.00049 *8*, unweighted average of 0.00041 *9* (1974Av03) and 0.00057 *5* (1988Fu05). α(M+...)exp: 0.00013 *3*, unweighted average of 0.00010 *2* (1974Av03) and 0.000157 *1* (1988Fu05). α(IPF): α_π = 0.00025 *5* 1971Al03; M1 theory 0.00027.
2623.871	5/2+	1726.23 *2*	100.0 *12*	897.698	3/2−	(E1)		0.001307 *19*	α(K)=0.000818 *12*; α(L)=0.0001214 *17*; α(M)=2.79×10^{-5} *4*; α(N+..)=0.000340 α(N)=7.06×10^{-6} *10*; α(O)=1.407×10^{-6} *20*; α(P)=1.486×10^{-7} *21*; α(IPF)=0.000331 *5* B(E1)(W.u.)=0.00034 *16* Mult.: A_2=−0.15 *3*; A_4=−0.01 *4* (2000Ka07).
		2054.29 *2*	22.0 *12*	569.6982	5/2−	(E1)		0.001301 *19*	α(K)=0.000615 *9*; α(L)=9.07×10^{-5} *13*; α(M)=2.08×10^{-5} *3*; α(N+..)=0.000575 *8* α(N)=5.27×10^{-6} *8*; α(O)=1.051×10^{-6} *15*; α(P)=1.116×10^{-7} *16*; α(IPF)=0.000568 *8* B(E1)(W.u.)=4.5×10^{-5} *20* Mult.: A_2=+0.22 *4*; A_4=−0.05 *5* (2000Ka07); ΔJ=0.
2662.476	7/2+	322.5	<2	2339.921	7/2−	[E1]		0.0250	α(K)=0.0205 *3*; α(L)=0.00344 *5*; α(M)=0.000803 *12*; α(N+..)=0.000245 *4* α(N)=0.000202 *3*; α(O)=3.94×10^{-5} *6*; α(P)=3.68×10^{-6} *6* B(E1)(W.u.)=8.E−5 *+9−8* E_γ,I_γ: From Coulomb excitation.
		2092.78 *2*	100.0 *11*	569.6982	5/2−	E1		0.001306 *19*	α(K)=0.000596 *9*; α(L)=8.80×10^{-5} *13*; α(M)=2.02×10^{-5} *3*; α(N+..)=0.000601 *9* α(N)=5.11×10^{-6} *8*; α(O)=1.020×10^{-6} *15*; α(P)=1.083×10^{-7} *16*; α(IPF)=0.000595 *9* B(E1)(W.u.)=3.0×10^{-5} *5* Mult.: A_2=−0.17 *3*; A_4=−0.03 *5* (2000Ka07).

$^{207}_{82}Pb_{125}$-17

Adopted Levels, Gammas (continued)

$\gamma(^{207}Pb)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
2662.476	7/2$^+$	2662.25 *4*	5.3 *12*	0.0	1/2$^-$	[E3]	0.00240 *4*	α(K)=0.001649 *23*; α(L)=0.000281 *4*; α(M)=6.59×10^{-5} *10*; α(N+..)=0.000408 *6* α(N)=1.672×10^{-5} *24*; α(O)=3.32×10^{-6} *5*; α(P)=3.47×10^{-7} *5*; α(IPF)=0.000388 *6* B(E3)(W.u.)=38 *11* Mult.: A_2=+0.59 *6*; A_4=+0.17 *8* (2000Ka07). B(E3)(W.u.): 38 *9* (1999Ya07) in ^{207}Pb(n,n′γ).
2727.892	9/2$^+$	388.2 *5*	19.5 *12*	2339.921	7/2$^-$	(E1)	0.01646	α(K)=0.01355 *19*; α(L)=0.00223 *4*; α(M)=0.000520 *8*; α(N+..)=0.0001592 *23* α(N)=0.0001311 *19*; α(O)=2.56×10^{-5} *4*; α(P)=2.45×10^{-6} *4* E_γ: Uncertainty assigned by the evaluators. Mult.: A_2=−0.18 *3*; A_4=+0.02 *4* (2000Ka07).
		1094.7 *1*	100.0 *12*	1633.356	13/2$^+$	E2	0.00559 *8*	α(K)=0.00449 *7*; α(L)=0.000842 *12*; α(M)=0.000200 *3*; α(N+..)=6.15×10^{-5} *9* α(N)=5.06×10^{-5} *7*; α(O)=9.92×10^{-6} *14*; α(P)=9.72×10^{-7} *14* E_γ: From ^{206}Pb(d,pγ). Mult.: A_2=+0.18 *3*; A_4=−0.02 *5* (2000Ka07).
		2158.16 *3*	2.4 *12*	569.6982	5/2$^-$	[M2]	0.00626 *9*	α(K)=0.00491 *7*; α(L)=0.000827 *12*; α(M)=0.000194 *3*; α(N+..)=0.000330 *5* α(N)=4.92×10^{-5} *7*; α(O)=9.83×10^{-6} *14*; α(P)=1.056×10^{-6} *15*; α(IPF)=0.000270 *4* Mult.: A_2=+0.11 *10*; A_4=−0.05 *15* (2000Ka07).
3175.674	9/2$^{(+)}$	447.81 *2*	44 *3*	2727.892	9/2$^+$	(M1)	0.1447	α(K)=0.1185 *17*; α(L)=0.0200 *3*; α(M)=0.00468 *7*; α(N+..)=0.001453 *21* α(N)=0.001190 *17*; α(O)=0.000237 *4*; α(P)=2.54×10^{-5} *4* B(M1)(W.u.)<0.089 Mult.: A_2=+0.39 *6*; A_4=+0.10 *8* (2000Ka07); ΔJ=0.
		835.73 *2*	62 *3*	2339.921	7/2$^-$	(E1)	0.00348 *5*	α(K)=0.00289 *4*; α(L)=0.000446 *7*; α(M)=0.0001031 *15*; α(N+..)=3.18×10^{-5} *5* α(N)=2.61×10^{-5} *4*; α(O)=5.16×10^{-6} *8*; α(P)=5.27×10^{-7} *8* B(E1)(W.u.)<0.00017 Mult.: A_2=−0.13 *7*; A_4=+0.12 *9* (2000Ka07). B(E1)(W.u.): <1.7×10^{-4} (1998Ye02).
		1542.32 *2*	91 *3*	1633.356	13/2$^+$	(E2)	0.00301 *5*	α(K)=0.00240 *4*; α(L)=0.000408 *6*; α(M)=9.56×10^{-5} *14*; α(N+..)=0.0001067 *15* α(N)=2.42×10^{-5} *4*; α(O)=4.79×10^{-6} *7*; α(P)=4.91×10^{-7} *7*; α(IPF)=7.72×10^{-5} *11* B(E2)(W.u.)<0.67 Mult.: A_2=+0.21 *2*; A_4=−0.03 *4* (2000Ka07).
		2605.6 *1*	100 *3*	569.6982	5/2$^-$	[M2]	0.00425 *6*	α(K)=0.00311 *5*; α(L)=0.000516 *8*; α(M)=0.0001204 *17*; α(N+..)=0.000510 *8* α(N)=3.06×10^{-5} *5*; α(O)=6.11×10^{-6} *9*; α(P)=6.58×10^{-7} *10*;

$^{207}_{82}Pb_{125}$-18

Adopted Levels, Gammas (continued)

γ(^{207}Pb) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
								α(IPF)=0.000473 *7* B(M2)(W.u.)<6.1 E_γ: Uncertainty assigned by the evaluators. Mult.: A_2=+0.28 *4*; A_4=−0.14 *6* (2000Ka07).
3181.490	1/2,3/2	2283.82 *2*	100.0 *15*	897.698	3/2$^-$	D(+Q)		Mult.: A_2=+0.05 *5*; A_4=−0.01 *7* (2000Ka07).
		2612.6[&] *10*	<12	569.6982	5/2$^-$			E_γ,I_γ: From ^{206}Pb(d,pγ). Eγ=2612.04 in ^{207}Pb(n,n′γ) (2000Ka07) is based on energy levels difference.
		3181.30 *4*	34 *7*	0.0	1/2$^-$	D(+Q)		I_γ: From ^{206}Pb(d,pγ). Mult.: A_2=−0.07 *5*; A_4=+0.08 *6* (2000Ka07).
3202.702	5/2	2305.03 *4*	14.9 *6*	897.698	3/2$^-$	D(+Q)		I_γ: 78 *4* in ^{206}Pb(d,pγ). Mult.: A_2=−0.07 *4*; A_4=−0.03 *6* (2000Ka07).
		2632.97 *3*	100.0 *6*	569.6982	5/2$^-$	D		Mult.: A_2=+0.19 *3*; A_4=−0.04 *5* (2000Ka07); ΔJ=0. B(E1)(W.u.): 4.5×10^{-4} *12* (1998Ye02).
3218.47	7/2	2648.75 *3*	100	569.6982	5/2$^-$	D		Mult.: A_2=−0.2 *3*; A_4=−0.02 *4* (2000Ka07). B(E1)(W.u.): 2.6×10^{-4} *8* (1998Ye02).
3225.542	11/2$^+$	1592.22 *2*	100.0 *7*	1633.356	13/2$^+$	M1	0.00559 *8*	α(K)=0.00448 *7*; α(L)=0.000730 *11*; α(M)=0.0001698 *24*; α(N+..)=0.000213 *3* α(N)=4.31×10^{-5} *6*; α(O)=8.62×10^{-6} *12*; α(P)=9.29×10^{-7} *13*; α(IPF)=0.0001606 *23* B(M1)(W.u.)<0.015 Mult.: A_2=−0.28 *3*; A_4=−0.01 *4* (2000Ka07).
		2655.32 *7*	8.7 *7*	569.6982	5/2$^-$	(E3)	0.00241 *4*	α(K)=0.001658 *24*; α(L)=0.000283 *4*; α(M)=6.62×10^{-5} *10*; α(N+..)=0.000406 *6* α(N)=1.681×10^{-5} *24*; α(O)=3.34×10^{-6} *5*; α(P)=3.49×10^{-7} *5*; α(IPF)=0.000386 *6* B(E3)(W.u.)<1.2×10^2 Mult.: A_2=+0.86 *15*; A_4=+0.07 *20* (2000Ka07).
3302.85	1/2$^+$	2405.35 *8*	20.5 *24*	897.698	3/2$^-$	E1	0.001370 *20*	α(K)=0.000477 *7*; α(L)=7.00×10^{-5} *10*; α(M)=1.607×10^{-5} *23*; α(N+..)=0.000807 α(N)=4.07×10^{-6} *6*; α(O)=8.12×10^{-7} *12*; α(P)=8.65×10^{-8} *13*; α(IPF)=0.000802 *12* B(E1)(W.u.)=0.00024 *4* Mult.: A_2=−0.17 *9*; A_4=+0.01 *13* (2000Ka07). B(E1)(W.u.): 1.4×10^{-4} *8* (1998Ye02).
		3302.77 *4*	100.0 *24*	0.0	1/2$^-$	E1	0.001647 *23*	α(K)=0.000290 *4*; α(L)=4.22×10^{-5} *6*; α(M)=9.68×10^{-6} *14*; α(N+..)=0.001305 *19* α(N)=2.45×10^{-6} *4*; α(O)=4.90×10^{-7} *7*; α(P)=5.24×10^{-8} *8*; α(IPF)=0.001302 *19* B(E1)(W.u.)=0.00045 *3* Mult.: A_2=−0.06 *3*; A_4=−0.4 *4* (2000Ka07). B(E1)(W.u.): 5.7×10^{-4} *31* (1998Ye02).

$^{207}_{82}Pb_{125}$-19

Adopted Levels, Gammas (continued)

γ(^{207}Pb) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
3384.579	9/2$^+$	656.62 *2*	100.0 *19*	2727.892	9/2$^+$	M1+E2	0.034 *19*	α(K)=0.028 *16*; α(L)=0.0051 *22*; α(M)=0.0012 *5*; α(N+..)=0.00037 *16* α(N)=0.00031 *13*; α(O)=6.E−5 *3*; α(P)=6.E−6 *3* Mult.: A_2=+0.38 *4*; A_4=−0.04 *5* (2000Ka07).
		761.4[&] *5*		2623.871	5/2$^+$	[E2]	0.01151	α(K)=0.00889 *13*; α(L)=0.00199 *3*; α(M)=0.000481 *7*; α(N+..)=0.0001476 *21* α(N)=0.0001219 *18*; α(O)=2.36×10^{-5} *4*; α(P)=2.13×10^{-6} *3*
		1044.71 *2*	37.0 *19*	2339.921	7/2$^-$	E1	0.00231 *4*	α(K)=0.00193 *3*; α(L)=0.000294 *5*; α(M)=6.77×10^{-5} *10*; α(N+..)=2.09×10^{-5} *3* α(N)=1.712×10^{-5} *24*; α(O)=3.40×10^{-6} *5*; α(P)=3.52×10^{-7} *5* B(E1)(W.u.)<0.00012 Mult.: A_2=−0.17 *4*; A_4=−0.01 *5* (2000Ka07).
		1751.12 *2*	48.2 *19*	1633.356	13/2$^+$	E2	0.00248 *4*	α(K)=0.00191 *3*; α(L)=0.000317 *5*; α(M)=7.39×10^{-5} *11*; α(N+..)=0.0001783 *25* α(N)=1.87×10^{-5} *3*; α(O)=3.71×10^{-6} *6*; α(P)=3.85×10^{-7} *6*; α(IPF)=0.0001555 *22* B(E2)(W.u.)<0.43 Mult.: A_2=+0.24 *4*; A_4=−0.04 *5* (2000Ka07).
		2486.2[&] *5*		897.698	3/2$^-$	[E3]	0.00263 *4*	α(K)=0.00188 *3*; α(L)=0.000325 *5*; α(M)=7.64×10^{-5} *11*; α(N+..)=0.000347 *5* α(N)=1.94×10^{-5} *3*; α(O)=3.84×10^{-6} *6*; α(P)=4.01×10^{-7} *6*; α(IPF)=0.000324 *5*
3414.20	3/2,5/2,7/2	2844.48 *4*	100	569.6982	5/2$^-$	D(+Q)		Mult.: A_2=+0.02 *4*; A_4=−0.07 *6* (2000Ka07).
3415.480	9/2$^-$	752.92 *2*	49.2 *16*	2662.476	7/2$^+$	E1	0.00423 *6*	α(K)=0.00352 *5*; α(L)=0.000547 *8*; α(M)=0.0001264 *18*; α(N+..)=3.89×10^{-5} *6* α(N)=3.20×10^{-5} *5*; α(O)=6.31×10^{-6} *9*; α(P)=6.41×10^{-7} *9* B(E1)(W.u.)=0.0008 *+4−8* Mult.: A_2=+0.43 *5*; A_4=−0.02 *7* (2000Ka07); ΔJ=0.
		791.66 *2*	100 *3*	2623.871	5/2$^+$	[M2]	0.0825	α(K)=0.0658 *10*; α(L)=0.01266 *18*; α(M)=0.00302 *5*; α(N+..)=0.000938 *14* α(N)=0.000769 *11*; α(O)=0.0001529 *22*; α(P)=1.607×10^{-5} *23* B(M2)(W.u.)=1.0×10^4 *+6−10* Mult.: A_2=−0.35 *11*; A_4=−0.50 *17* (2000Ka07).
		1075.63 *7*	14.8 *16*	2339.921	7/2$^-$	M1+E2	0.010 *5*	α(K)=0.008 *4*; α(L)=0.0014 *6*; α(M)=0.00034 *13*; α(N+..)=0.00010 *4* α(N)=9.E−5 *4*; α(O)=1.7×10^{-5} *7*; α(P)=1.8×10^{-6} *8* Mult.: A_2=+0.35 *20*; A_4=+0.33 *27* (2000Ka07).
3429.843	(9/2$^+$)	701.88 *3*	63.9 *16*	2727.892	9/2$^+$	[M1]	0.0443	α(K)=0.0364 *5*; α(L)=0.00607 *9*; α(M)=0.001417 *20*; α(N+..)=0.000440 *7* α(N)=0.000360 *5*; α(O)=7.19×10^{-5} *10*; α(P)=7.71×10^{-6} *11* B(M1)(W.u.)<0.056 Mult.: A_2=+0.54 *9*; A_4=+0.08 *12* (2000Ka07).

$^{207}_{82}Pb_{125}$-20

Adopted Levels, Gammas (continued)

$\gamma(^{207}Pb)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
3429.843	(9/2$^+$)	1796.51 *2*	100.0 *16*	1633.356	13/2$^+$	[E2]	0.00239 *4*	α(K)=0.00183 *3*; α(L)=0.000301 *5*; α(M)=7.02×10^{-5} *10*; α(N+..)=0.000196 *3* α(N)=1.779×10^{-5} *25*; α(O)=3.53×10^{-6} *5*; α(P)=3.67×10^{-7} *6*; α(IPF)=0.0001742 *25* B(E2)(W.u.)<0.57 Mult.: A_2=−0.74 *3*; A_4=+0.06 *5* (2000Ka07) is inconsistent with the expected E2 multipolarity.
3476.364	9/2$^{(+)}$	748.40 *2*	43.2 *14*	2727.892	9/2$^+$	[M1]	0.0375	α(K)=0.0308 *5*; α(L)=0.00513 *8*; α(M)=0.001198 *17*; α(N+..)=0.000372 *6* α(N)=0.000304 *5*; α(O)=6.07×10^{-5} *9*; α(P)=6.52×10^{-6} *10* B(M1)(W.u.)<0.025 Mult.: A_2=−0.11 *5*; A_4=+0.06 *7* (2000Ka07).
		1136.42 *2*	86.4 *16*	2339.921	7/2$^-$	[E1]	0.00200 *3*	α(K)=0.001665 *24*; α(L)=0.000252 *4*; α(M)=5.80×10^{-5} *9*; α(N+..)=2.08×10^{-5} *3* α(N)=1.468×10^{-5} *21*; α(O)=2.91×10^{-6} *4*; α(P)=3.03×10^{-7} *5*; α(IPF)=2.94×10^{-6} *5* B(E1)(W.u.)<0.00013 Mult.: A_2=−0.2 *3*; A_4=−0.04 *5* (2000Ka07).
		1843.09 *2*	100.0 *21*	1633.356	13/2$^+$	[E2]	0.00231 *4*	α(K)=0.001744 *25*; α(L)=0.000286 *4*; α(M)=6.67×10^{-5} *10*; α(N+..)=0.000215 *3* α(N)=1.691×10^{-5} *24*; α(O)=3.35×10^{-6} *5*; α(P)=3.49×10^{-7} *5*; α(IPF)=0.000194 *3* B(E2)(W.u.)<0.41 Mult.: A_2=+0.13 *7*; A_4=−0.22 *10* (2000Ka07).
3509.849	11/2$^+$	782.00 *2*	49.3 *9*	2727.892	9/2$^+$	M1	0.0335	α(K)=0.0275 *4*; α(L)=0.00457 *7*; α(M)=0.001068 *15*; α(N+..)=0.000331 *5* α(N)=0.000271 *4*; α(O)=5.41×10^{-5} *8*; α(P)=5.81×10^{-6} *9* B(M1)(W.u.)<0.072 Mult.: A_2=−0.80 *4*; A_4=−0.07 *6* (2000Ka07).
		1876.44 *2*	100.0 *9*	1633.356	13/2$^+$	(M1)	0.00393 *6*	α(K)=0.00295 *5*; α(L)=0.000479 *7*; α(M)=0.0001114 *16*; α(N+..)=0.000381 *6* α(N)=2.83×10^{-5} *4*; α(O)=5.65×10^{-6} *8*; α(P)=6.10×10^{-7} *9*; α(IPF)=0.000346 *5* B(M1)(W.u.)<0.011 Mult.: A_2=+0.48 *4*; A_4=+0.02 *6* (2000Ka07).
3524.026	5/2,7/2	861.57 *2*	100.0 *17*	2662.476	7/2$^+$	Q,D		Mult.: A_2=+0.24 *3*; A_4=+0.01 *4* (2000Ka07).
		2954.21 *4*	69.5 *17*	569.6982	5/2$^-$	D		Mult.: A_2=−0.17 *4*; A_4=+0.07 *5* (2000Ka07).
3582.04	1/2$^+$,3/2,5/2	958.6 *1*	17.0 *19*	2623.871	5/2$^+$	Q,D		Mult.: A_2=+0.68 *24*; A_4=+0.06 *35* (2000Ka07).
		2684.28 *3*	100.0 *19*	897.698	3/2$^-$	D		Mult.: A_2=−0.18 *2*; A_4=−0.06 *33* (2000Ka07).
		3012.32 *4*	71.7 *19*	569.6982	5/2$^-$	Q,D		Mult.: A_2=+0.17 *5*; A_4=−0.03 *7* (2000Ka07).
3584.150	9/2$^{(+)}$	921.66 *1*	100.0 *13*	2662.476	7/2$^+$	[M1]	0.0219	α(K)=0.0180 *3*; α(L)=0.00298 *5*; α(M)=0.000695 *10*;

$^{207}_{82}Pb_{125}$-21

Adopted Levels, Gammas (continued)

γ(^{207}Pb) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
								α(N+..)=0.000216 *3* α(N)=0.0001766 *25*; α(O)=3.53×10^{-5} *5*; α(P)=3.79×10^{-6} *6* B(M1)(W.u.)=0.20 *+6−15* Mult.: A_2=−0.14 *3*; A_4=−0.03 *5* (2000Ka07).
3584.150	9/2$^{(+)}$	1244.33 *3*	19.0 *13*	2339.921	7/2$^-$	[E1]	0.001730 *25*	α(K)=0.001421 *20*; α(L)=0.000214 *3*; α(M)=4.93×10^{-5} *7*; α(N+..)=4.57×10^{-5} *7* α(N)=1.247×10^{-5} *18*; α(O)=2.48×10^{-6} *4*; α(P)=2.59×10^{-7} *4*; α(IPF)=3.05×10^{-5} *5* B(E1)(W.u.)=0.00013 *+4−10* Mult.: A_2=−0.21 *9*; A_4=+0.15 *12* (2000Ka07).
		1950.79 *5*	8.9 *13*	1633.356	13/2$^+$	[E2]	0.00215 *3*	α(K)=0.001575 *22*; α(L)=0.000256 *4*; α(M)=5.96×10^{-5} *9*; α(N+..)=0.000260 *4* α(N)=1.511×10^{-5} *22*; α(O)=3.00×10^{-6} *5*; α(P)=3.14×10^{-7} *5*; α(IPF)=0.000242 *4* B(E2)(W.u.)=0.17 *+6−13* Mult.: A_2=+0.24 *10*; A_4=+0.18 *14* (2000Ka07).
3620.496	11/2$^+$	1987.13 *2*	100	1633.356	13/2$^+$	M1+E2	0.0028 *7*	α(K)=0.0020 *6*; α(L)=0.00033 *9*; α(M)=7.7×10^{-5} *20*; α(N+..)=0.00037 *9* α(N)=2.0×10^{-5} *5*; α(O)=3.9×10^{-6} *10*; α(P)=4.1×10^{-7} *12*; α(IPF)=0.00034 *9* Mult.: A_2=−0.05 *3*; A_4=−0.02 *5* (2000Ka07).
3634.360	3/2$^+$,5/2$^+$	973.0[&] *2*	4 *1*	2662.476	7/2$^+$			E_γ,I_γ: From ^{206}Pb(d,pγ).
		1010.66 *3*	25.0 *13*	2623.871	5/2$^+$	[M1]	0.01731	α(K)=0.01424 *20*; α(L)=0.00235 *4*; α(M)=0.000547 *8*; α(N+..)=0.0001698 *24* α(N)=0.0001390 *20*; α(O)=2.78×10^{-5} *4*; α(P)=2.99×10^{-6} *5* B(M1)(W.u.)=0.036 *+11−22* Mult.: A_2=+0.05 *13*; A_4=−0.32 *20* (2000Ka07).
		2736.46 *3*	100.0 *13*	897.698	3/2$^-$	[E1]	0.001462 *21*	α(K)=0.000389 *6*; α(L)=5.69×10^{-5} *8*; α(M)=1.305×10^{-5} *19*; α(N+..)=0.001004 *1* α(N)=3.30×10^{-6} *5*; α(O)=6.59×10^{-7} *10*; α(P)=7.04×10^{-8} *10*; α(IPF)=0.001000 *14* B(E1)(W.u.)=6.4×10^{-5} *+20−39* Mult.: A_2=−0.20 *3*; A_4=−0.06 *5* (2000Ka07).
		3064.6 *2*	19 *1*	569.6982	5/2$^-$			E_γ,I_γ: From ^{206}Pb(d,pγ).
3650.09	9/2$^-$,11/2$^-$	2016.72 *3*	100	1633.356	13/2$^+$			Mult.: A_2=+0.24 *4*; A_4=+0.05 *5* (2000Ka07).
3673.82	9/2,11/2	2040.45 *3*	100	1633.356	13/2$^+$			Mult.: A_2=+0.29 *4*; A_4=−0.01 *6* (2000Ka07).
3711.40	(7/2$^+$)	1048.90 *5*	24.6 *16*	2662.476	7/2$^+$	[M1]	0.01574	α(K)=0.01295 *19*; α(L)=0.00213 *3*; α(M)=0.000497 *7*; α(N+..)=0.0001542 *22* α(N)=0.0001263 *18*; α(O)=2.52×10^{-5} *4*; α(P)=2.71×10^{-6} *4*

$^{207}_{82}Pb_{125}$-22

Adopted Levels, Gammas (continued)

$\gamma(^{207}Pb)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
								B(M1)(W.u.)<0.024 Mult.: A_2=+0.49 *16*; A_4=+0.02 *23* (2000Ka07).
3711.40	(7/2$^+$)	1087.58 *3*	39.3 *16*	2623.871	5/2$^+$	[M1]	0.01434	α(K)=0.01181 *17*; α(L)=0.00194 *3*; α(M)=0.000453 *7*; α(N+..)=0.0001404 *20* α(N)=0.0001150 *16*; α(O)=2.30×10^{-5} *4*; α(P)=2.47×10^{-6} *4*
								B(M1)(W.u.)<0.035 Mult.: A_2=−0.14 *5*; A_4=0.001 *70* (2000Ka07).
		3141.2 *1*	100.0 *16*	569.6982	5/2$^-$	[E1]	0.001598 *23*	α(K)=0.000313 *5*; α(L)=4.57×10^{-5} *7*; α(M)=1.048×10^{-5} *15*; α(N+..)=0.001228 *1* α(N)=2.65×10^{-6} *4*; α(O)=5.30×10^{-7} *8*; α(P)=5.67×10^{-8} *8*; α(IPF)=0.001225 *18*
								B(E1)(W.u.)<3.2×10^{-5} E_γ: Uncertainty assigned by the evaluators. Mult.: A_2=−0.24 *3*; A_4=−0.02 *5* (2000Ka07).
3726.094	(5/2$^+$,7/2$^+$)	998.20 *2*	100 *4*	2727.892	9/2$^+$	[M1,E2]	0.012 *6*	α(K)=0.010 *5*; α(L)=0.0017 *7*; α(M)=0.00041 *16*; α(N+..)=0.00013 *5* α(N)=0.00010 *4*; α(O)=2.0×10^{-5} *9*; α(P)=2.1×10^{-6} *10*
								Mult.: A_2=+0.35 *3*; A_4=−0.01 *5* (2000Ka07).
		1063.71[&]	52 *5*	2662.476	7/2$^+$	[M1]	0.01518	α(K)=0.01250 *18*; α(L)=0.00206 *3*; α(M)=0.000479 *7*; α(N+..)=0.0001487 *21* α(N)=0.0001218 *17*; α(O)=2.43×10^{-5} *4*; α(P)=2.62×10^{-6} *4*
								B(M1)(W.u.)<0.028 Mult.: A_2=−0.02 *3*; A_4=−0.04 *5* (2000Ka07).
		1386.16 *6*	17 *4*	2339.921	7/2$^-$	[E1]	0.001509 *22*	α(K)=0.001181 *17*; α(L)=0.0001769 *25*; α(M)=4.07×10^{-5} *6*; α(N+..)=0.000110 α(N)=1.030×10^{-5} *15*; α(O)=2.05×10^{-6} *3*; α(P)=2.15×10^{-7} *3*; α(IPF)=9.76×10^{-5} *14*
								B(E1)(W.u.)<3.6×10^{-5} Mult.: A_2=−0.59 *19*; A_4=+0.04 *27* (2000Ka07).
		2093.0[&] *5*		1633.356	13/2$^+$			
3828.997	9/2$^+$,11/2$^+$	444.31 *2*	100.0 *16*	3384.579	9/2$^+$	(M1+E2)	0.09 *6*	α(K)=0.07 *5*; α(L)=0.015 *6*; α(M)=0.0036 *12*; α(N+..)=0.0011 *4* α(N)=0.0009 *3*; α(O)=0.00018 *7*; α(P)=1.7×10^{-5} *9*
								Mult.: A_2=+0.42 *4*; A_4=+0.04 *6* (2000Ka07).
		1101.21 *2*	57.8 *16*	2727.892	9/2$^+$	(M1+E2)	0.010 *5*	α(K)=0.008 *4*; α(L)=0.0014 *6*; α(M)=0.00032 *12*; α(N+..)=0.00010 *4* α(N)=8.E−5 *3*; α(O)=1.6×10^{-5} *7*; α(P)=1.7×10^{-6} *8*; α(IPF)=2.2×10^{-7} *7*
								Mult.: A_2=+0.20 *5*; A_4=−0.07 *8* (2000Ka07).
3857?	13/2,15/2,17/2	2225.0[&] *5*	100	1633.356	13/2$^+$			

$^{207}_{82}Pb_{125}$-23

Adopted Levels, Gammas (continued)

$\gamma(^{207}Pb)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	δ	α[†]	Comments
3869.37	$9/2^+,11/2^+,13/2^+$	2236.00 *5*	100	1633.356	$13/2^+$	Q,D			Mult.: A_2=+0.52 *7*; A_4=+0.0 *1* (2000Ka07).
3877.31	$(3/2^+,5/2^+)$	2979.7[#] *1*	100[#] *5*	897.698	$3/2^-$	[E1]		0.001539 *22*	α(K)=0.000340 *5*; α(L)=4.97×10^{-5} *7*; α(M)=1.139×10^{-5} *16*; α(N+..)=0.001138 *1* α(N)=2.88×10^{-6} *4*; α(O)=5.76×10^{-7} *8*; α(P)=6.16×10^{-8} *9*; α(IPF)=0.001135 *16*
		3303[#] *1*	60[#] *3*	569.6982	$5/2^-$	[E1]		0.001647 *23*	α(K)=0.000290 *4*; α(L)=4.22×10^{-5} *6*; α(M)=9.68×10^{-6} *14*; α(N+..)=0.001305 *19* α(N)=2.45×10^{-6} *4*; α(O)=4.89×10^{-7} *7*; α(P)=5.24×10^{-8} *8*; α(IPF)=0.001302 *19* E_γ: Uncertainty assigned by the evaluators.
		3875.7[#] *5*	17[#] *3*	0.0	$1/2^-$				
3887.70	(1/2,3/2,5/2)	3317.9[#] *2*	100[#] *5*	569.6982	$5/2^-$				
		3888.1[#] *5*	88[#] *20*	0.0	$1/2^-$				
3888.30	(9/2,11/2)	1225.97 *3*	89 *3*	2662.476	$7/2^+$	Q			Mult.: A_2=+0.33 *7*; A_4=−0.02 *10* (2000Ka07).
		2255.4 *5*	84 *3*	1633.356	$13/2^+$	D,Q			E_γ: Uncertainty assigned by the evaluators.
		3318.16 *5*	100 *3*	569.6982	$5/2^-$				Mult.: A_2=−0.30 *6*; A_4=+0.10 *80* (2000Ka07).
3901.0	13/2,15/2,17/2	2267.7[&] *5*	100	1633.356	$13/2^+$				
3903.33	$(13/2^+)$	1175.43 *10*	100	2727.892	$9/2^+$	[E2]		0.00488 *7*	α(K)=0.00394 *6*; α(L)=0.000721 *10*; α(M)=0.0001703 *24*; α(N+..)=5.46×10^{-5} *8* α(N)=4.32×10^{-5} *6*; α(O)=8.48×10^{-6} *12*; α(P)=8.41×10^{-7} *12*; α(IPF)=2.14×10^{-6} *3* B(E2)(W.u.)<2.0×10^2 Mult.: A_2=+0.32 *11*; A_4=+0.16 *14* (2000Ka07).
3928.9	$3/2^-$	3928.9[@] *10*	100[@]	0.0	$1/2^-$	M1+E2	+0.72 *6*	0.00198 *4*	α(K)=0.000455 *7*; α(L)=7.13×10^{-5} *11*; α(M)=1.651×10^{-5} *24*; α(N+..)=0.00143 *3* α(N)=4.19×10^{-6} *6*; α(O)=8.38×10^{-7} *12*; α(P)=9.04×10^{-8} *13*; α(IPF)=0.00143 *3* B(M1)(W.u.)=0.237 *20*; B(E2)(W.u.)=2.8 *4* Mult.,δ: A_2=+0.44 *7* (1974Sw05). Given J=3/2, this yields δ values −0.10 *4*, +0.72 *6*, −1.39 *10*, or +9.9 *+52−27*. These rule out the possibility of E1+M2, provided branching(3928γ)>40%.
3999.762	$(5/2^+)$	1375.89 *2*	100	2623.871	$5/2^+$	[M1]		0.00792 *11*	α(K)=0.00649 *9*; α(L)=0.001060 *15*; α(M)=0.000247 *4*; α(N+..)=0.0001292 *1* α(N)=6.27×10^{-5} *9*; α(O)=1.252×10^{-5} *18*; α(P)=1.349×10^{-6} *19*; α(IPF)=5.26×10^{-5} *8* B(M1)(W.u.)=0.11 *+4−11* Mult.: A_2=+0.28 *4*; A_4=+0.02 *6* (2000Ka07).

$^{207}_{82}Pb_{125}$-24

Adopted Levels, Gammas (continued)

γ(^{207}Pb) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	δ	α[†]	Comments
4064.02	(9/2$^+$,11/2$^+$,13/2$^+$)	1336.12 *8*	100	2727.892	9/2$^+$	Q,D			Mult.: A_2=+0.13 *12*; A_4=+0.06 *17* (2000Ka07).
4088.38	3/2$^-$,5/2$^-$	3518.6[#] *2*	100[#]	569.6982	5/2$^-$				
4103.8	3/2$^-$	4103.8[@] *5*	100[@]	0.0	1/2$^-$	M1+E2	+1.2 *2*	0.00187 *6*	α(K)=0.000413 *6*; α(L)=6.39×10^{-5} *10*; α(M)=1.477×10^{-5} *22*; α(N+..)=0.00137 *6* α(N)=3.75×10^{-6} *6*; α(O)=7.49×10^{-7} *11*; α(P)=8.07×10^{-8} *12*; α(IPF)=0.00137 *6* B(M1)(W.u.)=0.48 *11*; B(E2)(W.u.)=14.6 *23* Mult.: A_2=0.74 *11* (1974Sw05) in ^{207}Pb(γ,γ′),(pol γ,γ′). Given J=3/2, this yields δ values −0.27 *7*, 1.01 *13*, +4.0 *12*. These rule out the possibility of E1+M2, provided branching(4104γ)>3%. δ: −0.9 *4* or +1.2 *2* from γ(θ) in 2003En07 (^{207}Pb(γ,γ′),(pol γ,γ′)).
4116.13	(1/2,3/2,5/2)	3218.1[#] *2*	7[#] *1*	897.698	3/2$^-$				
		4116.4[#] *2*	100[#] *5*	0.0	1/2$^-$				
4118.4	(15/2$^-$)	2485		1633.356	13/2$^+$				E_γ: From 2000Re12 in ^{208}Pb(^{136}Xe,Xγ),(^{208}Pb,Xγ).
4127.9		3558.18	100	569.6982	5/2$^-$				
4140.7	(5/2)$^-$	4140.7[@] *5*	100[@]	0.0	1/2$^-$	[E2]		0.001654 *24*	α(K)=0.000407 *6*; α(L)=6.18×10^{-5} *9*; α(M)=1.425×10^{-5} *20*; α(N+..)=0.001171 *1* α(N)=3.61×10^{-6} *5*; α(O)=7.22×10^{-7} *11*; α(P)=7.77×10^{-8} *11*; α(IPF)=0.001167 *17* B(E2)(W.u.)=6.5 *6*
4192.3	(11/2$^+$)	3622.6	100	569.6982	5/2$^-$				
4318.63	5/2$^+$	608[#] *1*	<9[#]	3711.40	(7/2$^+$)				
		684.2[#] *1*	22[#] *1*	3634.360	3/2$^+$,5/2$^+$				
		902.6[#] *1*	40[#] *2*	3415.480	9/2$^-$				
		1116.0[#] *5*	13[#] *1*	3202.702	5/2				
		1591.6[#] *10*	5[#] *1*	2727.892	9/2$^+$				
		1978.8[#] *1*	97[#] *5*	2339.921	7/2$^-$				
		3420.5[#] *1*	67[#] *3*	897.698	3/2$^-$				
		3748.7[#] *1*	100[#] *5*	569.6982	5/2$^-$				
		4319.7[#] *1*	<22[#]	0.0	1/2$^-$				
4388.56	5/2$^+$	299[#] *1*	<0.4[#]	4088.38	3/2$^-$,5/2$^-$				
		863.7[#] *5*	3[#] *1*	3524.026	5/2,7/2				

$^{207}_{82}Pb_{125}$-25

Adopted Levels, Gammas (continued)

$\gamma(^{207}Pb)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
4388.56	$5/2^+$	973.0[#] *3*	1[#] *1*	3415.480	$9/2^-$			
		1185.9[#] *1*	2[#] *1*	3202.702	5/2			
		1206.5[#] *5*	4[#] *1*	3181.490	1/2,3/2			
		1660.9[#] *1*	13[#] *1*	2727.892	$9/2^+$			
		1764.4[#] *3*	11[#] *1*	2623.871	$5/2^+$			
		2048.7[#] *3*	1[#] *1*	2339.921	$7/2^-$			
		3490.7[#] *1*	100[#] *5*	897.698	$3/2^-$			
		3818.8[#] *1*	28[#] *1*	569.6982	$5/2^-$			
		4388.3[#] *2*	7[#] *2*	0.0	$1/2^-$			
4479?		2846.4[&] *5*	100	1633.356	$13/2^+$			
4514.94	$3/2^+,5/2^+$	3945.2 *2*	100	569.6982	$5/2^-$			
4539.49	$1/2^+$	3641.8[#] *1*	79[#] *4*	897.698	$3/2^-$			
		4539.4[#] *1*	100[#] *20*	0.0	$1/2^-$			
4581.64	$5/2^+$	1379.8[#] *5*	7[#] *1*	3202.702	5/2			
		1401.0[#] *5*	5[#] *1*	3181.490	1/2,3/2			
		1958.6[#] *5*	17[#] *1*	2623.871	$5/2^+$			
		3683.5[#] *2*	100[#] *5*	897.698	$3/2^-$			
4611.67	(3/2,5/2)	1409.1 *5*	2 *1*	3202.702	5/2			
		1953.1[#] *5*	6[#] *1*	2662.476	$7/2^+$			
		1987.8 *3*	9 *1*	2623.871	$5/2^+$			
		2272 *1*	<2	2339.921	$7/2^-$			
		4048 *1*	6 *1*	569.6982	$5/2^-$			E_γ: Uncertainty assigned by the evaluators.
		4610.7 *2*	100 *20*	0.0	$1/2^-$			
4627.44	$1/2^+$	3729.7[#] *1*	8[#] *1*	897.698	$3/2^-$	[E1]	0.001784 *25*	α(K)=0.000241 *4*; α(L)=3.50×10^{-5} *5*; α(M)=8.01×10^{-6} *12*; α(N+..)=0.001501 *21* α(N)=2.03×10^{-6} *3*; α(O)=4.05×10^{-7} *6*; α(P)=4.34×10^{-8} *6*; α(IPF)=0.001498 *21* B(E1)(W.u.)=0.00039 *10*
		4627.4[#] *1*	100[#] *20*	0.0	$1/2^-$	[E1]	0.00205 *3*	α(K)=0.0001741 *25*; α(L)=2.52×10^{-5} *4*; α(M)=5.76×10^{-6} *8*; α(N+..)=0.00185 *3* α(N)=1.459×10^{-6} *21*; α(O)=2.92×10^{-7} *4*; α(P)=3.13×10^{-8} *5*; α(IPF)=0.00185 *3* B(E1)(W.u.)=0.0025 *8*
4669.84	$3/2^-,5/2^-$	4100.1[#] *2*	100[#]	569.6982	$5/2^-$			
4832.90	$3/2^+,5/2^+$	1629.0[#] *10*	89[#] *5*	3202.702	5/2			
		4263.2[#] *2*	100[#] *5*	569.6982	$5/2^-$			

$^{207}_{82}Pb_{125}$-26

Adopted Levels, Gammas (continued)

$\gamma(^{207}Pb)$ (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
4871.7	(1/2,3/2)	4871.6[@] *3*	100[@]	0.0	1/2$^-$	D		Mult.: From $\gamma(\theta)$ in 1974Sw05.
4980.5	1/2$^+$	4980.4[@] *3*	100[@]	0.0	1/2$^-$	E1	0.00216 *3*	α(K)=0.0001562 *22*; α(L)=2.25×10^{-5} *4*; α(M)=5.16×10^{-6} *8*; α(N+..)=0.00197 *3* α(N)=1.307×10^{-6} *19*; α(O)=2.61×10^{-7} *4*; α(P)=2.81×10^{-8} *4*; α(IPF)=0.00197 *3* B(E1)(W.u.)=0.0158 *21*
5129.47	(3/2)$^+$	4559.7[#] *2*	66[#] *3*	569.6982	5/2$^-$			
		5129.4[#] *1*	100[#] *20*	0.0	1/2$^-$			
5180.19	7/2$^+$	1181.4[#] *3*	5[#] *1*	3999.762	(5/2$^+$)			
		1542[#] *1*	7[#] *1*	3634.360	3/2$^+$,5/2$^+$			E_γ: Uncertainty assigned by the evaluators.
		2451.7[#] *1*	38[#] *2*	2727.892	9/2$^+$			
		2556.7[#] *1*	10[#] *1*	2623.871	5/2$^+$			
		4610.7[#] *2*	100[#] *5*	569.6982	5/2$^-$			
		5180.3[#] *2*	32[#] *6*	0.0	1/2$^-$			
5204.98	(5/2$^+$,7/2$^+$)	2476.8[#] *5*	25[#] *1*	2727.892	9/2$^+$			
		2542.5[#] *1*	100[#] *5*	2662.476	7/2$^+$			
5217.58	3/2$^+$	4319.7[#] *2*	2[#] *1*	897.698	3/2$^-$			
		4647.6[#] *2*	7[#] *1*	569.6982	5/2$^-$			
		5217.6[#] *1*	100[#] *20*	0.0	1/2$^-$			
5309.93	(7/2$^+$)	2581.9[#] *2*	22[#] *1*	2727.892	9/2$^+$			
		4740.3[#] *2*	100[#] *5*	569.6982	5/2$^-$			
5336.9	5/2$^+$,7/2$^+$	2674.4[#] *5*	100[#]	2662.476	7/2$^+$			
5429.46	(7/2)$^+$	4859.7[#] *2*	100[#]	569.6982	5/2$^-$			
5489.77	3/2$^+$	4920.0[@] *3*	25[@] *20*	569.6982	5/2$^-$	E1	0.00214 *3*	α(K)=0.0001590 *23*; α(L)=2.30×10^{-5} *4*; α(M)=5.26×10^{-6} *8*; α(N+..)=0.00195 *3* α(N)=1.331×10^{-6} *19*; α(O)=2.66×10^{-7} *4*; α(P)=2.86×10^{-8} *4*; α(IPF)=0.00195 *3* B(E1)(W.u.)=0.005 *5* Mult.: From 2009Pi14 in ^{207}Pb(γ,γ'),(pol γ,γ').
		5489.7[@] *3*	100[@] *24*	0.0	1/2$^-$	E1	0.00229 *4*	α(K)=0.0001355 *19*; α(L)=1.95×10^{-5} *3*; α(M)=4.47×10^{-6} *7*; α(N+..)=0.00213 *3* α(N)=1.131×10^{-6} *16*; α(O)=2.26×10^{-7} *4*; α(P)=2.43×10^{-8} *4*; α(IPF)=0.00213 *3* B(E1)(W.u.)=0.015 *7* Mult.: From 2009Pi14 in ^{207}Pb(γ,γ'),(pol γ,γ').

$^{207}_{82}Pb_{125}$-27

Adopted Levels, Gammas (continued)

γ(^{207}Pb) (continued)

E_i(level)	J_i^π	E_γ[‡]	I_γ[‡]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
5501.96	7/2$^-$,9/2$^-$	4932.2[#] *2*	100[#]	569.6982	5/2$^-$			
5573.14	(5/2)$^+$	5003.2[#] *2*	100[#] *5*	569.6982	5/2$^-$			
		5574.2[#] *5*	12[#] *1*	0.0	1/2$^-$			
5597.5	1/2$^{(+)}$	5597.4[@] *3*	100[@]	0.0	1/2$^-$	(E1)	0.00231 *4*	α(K)=0.0001318 *19*; α(L)=1.90×10^{-5} *3*; α(M)=4.34×10^{-6} *6*; α(N+..)=0.00216 *3* α(N)=1.099×10^{-6} *16*; α(O)=2.20×10^{-7} *3*; α(P)=2.36×10^{-8} *4*; α(IPF)=0.00216 *3* B(E1)(W.u.)=0.029 *3* Mult.: From 2009Pi14 based on γ(θ,φ) (^{207}Pb(γ,γ′),(pol γ,γ′)).
5611?	(3/2$^+$)	5611[@&] *2*	100[@]	0.0	1/2$^-$	E1	0.00232 *4*	α(K)=0.0001313 *19*; α(L)=1.89×10^{-5} *3*; α(M)=4.33×10^{-6} *6*; α(N+..)=0.00216 *3* α(N)=1.096×10^{-6} *16*; α(O)=2.19×10^{-7} *3*; α(P)=2.35×10^{-8} *4*; α(IPF)=0.00216 *3* B(E1)(W.u.)=0.0064 *12* Mult.: From 2009Pi14 based on γ(θ,φ) (^{207}Pb(γ,γ′),(pol γ,γ′)).
5690.1	(3/2$^+$)	5690.0[@] *16*	100[@]	0.0	1/2$^-$			
5715.7	(1/2,3/2)	5715.6[@] *4*	100[@]	0.0	1/2$^-$			
5734.1	(1/2,3/2)	5734[@] *2*	100[@]	0.0	1/2$^-$			
5794	(1/2,3/2)	5794[@] *4*	100[@]	0.0	1/2$^-$			
5824.5		5254.8[#] *3*	100[#]	569.6982	5/2$^-$			
		5824.1[#] *10*	[#]	0.0	1/2$^-$			
6106.58	(5/2$^+$,7/2$^+$)	5536.8[#] *2*	100[#]	569.6982	5/2$^-$			
6181.1	1/2,3/2	6181.0[@] *7*	100[@]	0.0	1/2$^-$			
6213.9	(1/2,3/2,5/2)	5316.1[#] *3*	100[#] *5*	897.698	3/2$^-$			
		6213.8[#] *10*	17[#] *3*	0.0	1/2$^-$			
6542	(1/2,3/2)	6542[@] *4*	100[@]	0.0	1/2$^-$			
6735	(1/2,3/2)	6735[@] *4*	100[@]	0.0	1/2$^-$			
6749	(1/2,3/2)	6749[@] *4*	100[@]	0.0	1/2$^-$			
6818	(1/2,3/2)	6818[@] *4*	100[@]	0.0	1/2$^-$			
7306	(1/2,3/2)	7306[@] *4*	100[@]	0.0	1/2$^-$			

[†] Additional information 1.
[‡] From ^{207}Pb(n,n′γ), unless otherwise stated.
[#] From ^{206}Pb(d,pγ).

$^{207}_{82}Pb_{125}$-28

$\gamma(^{207}Pb)$ (continued)

@ From $^{207}Pb(\gamma,\gamma')$,(pol γ,γ').
& Placement of transition in the level scheme is uncertain.

$^{207}_{82}Pb_{125}$-29

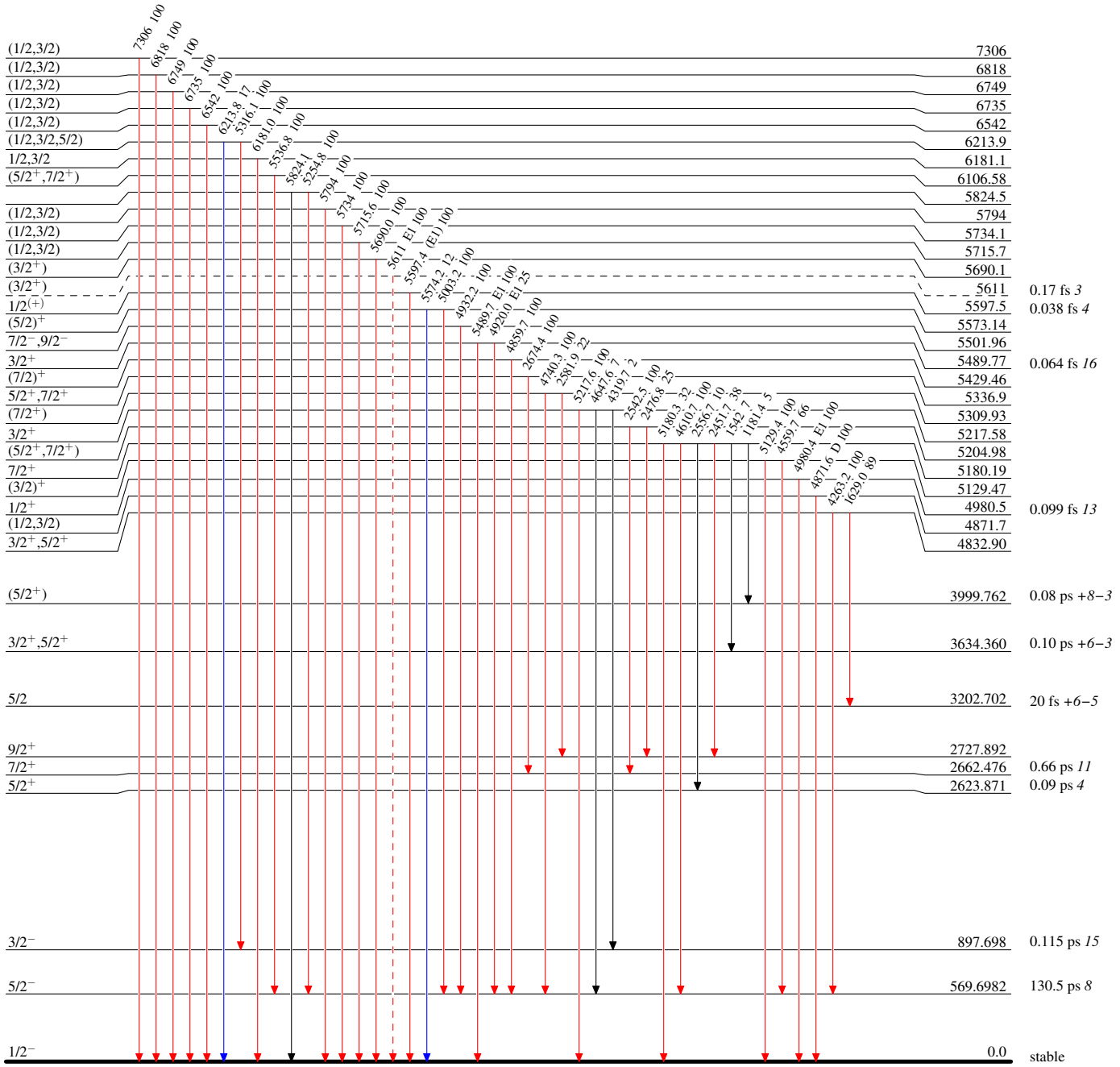
Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)

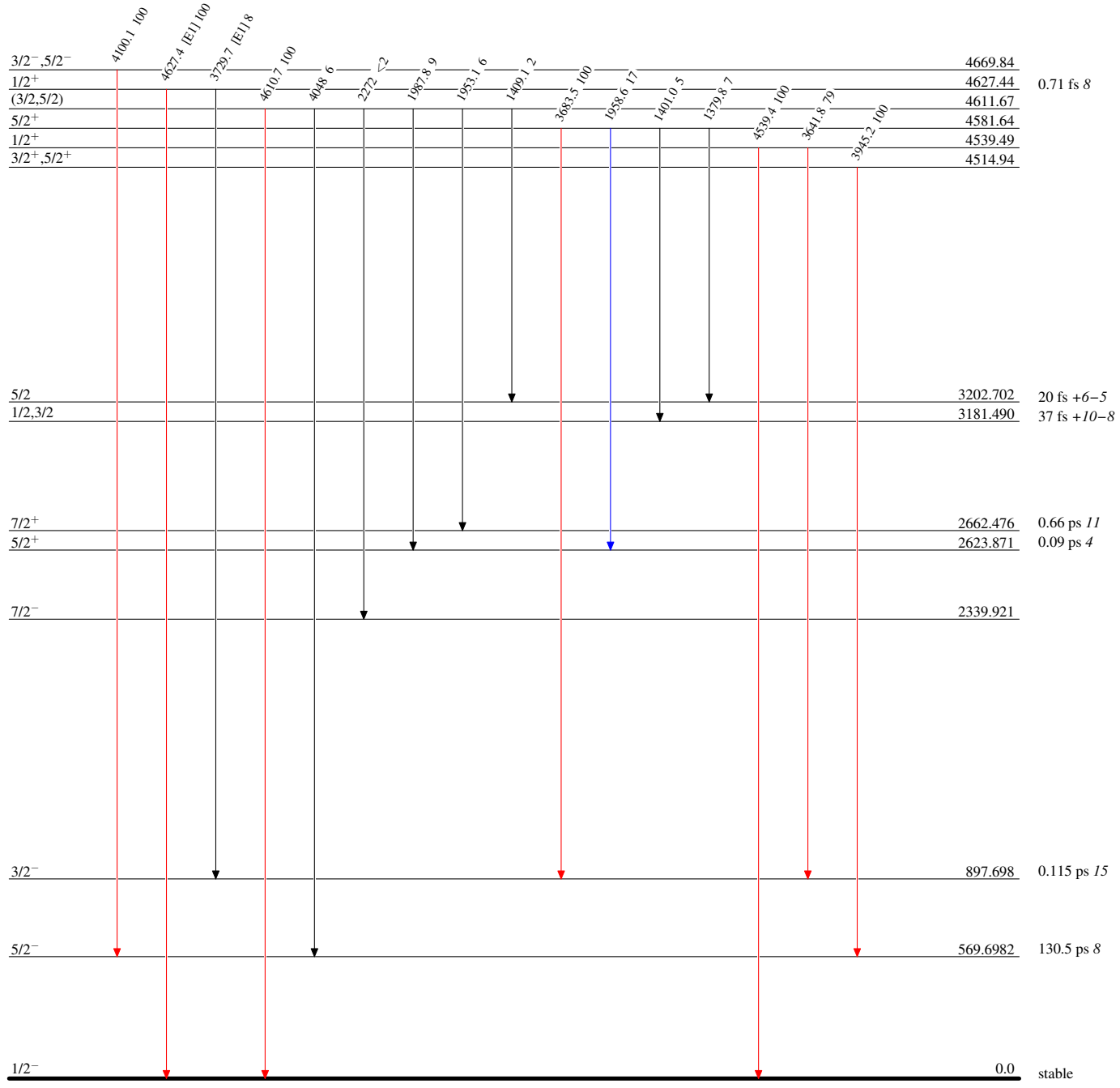


$^{207}_{82}Pb_{125}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

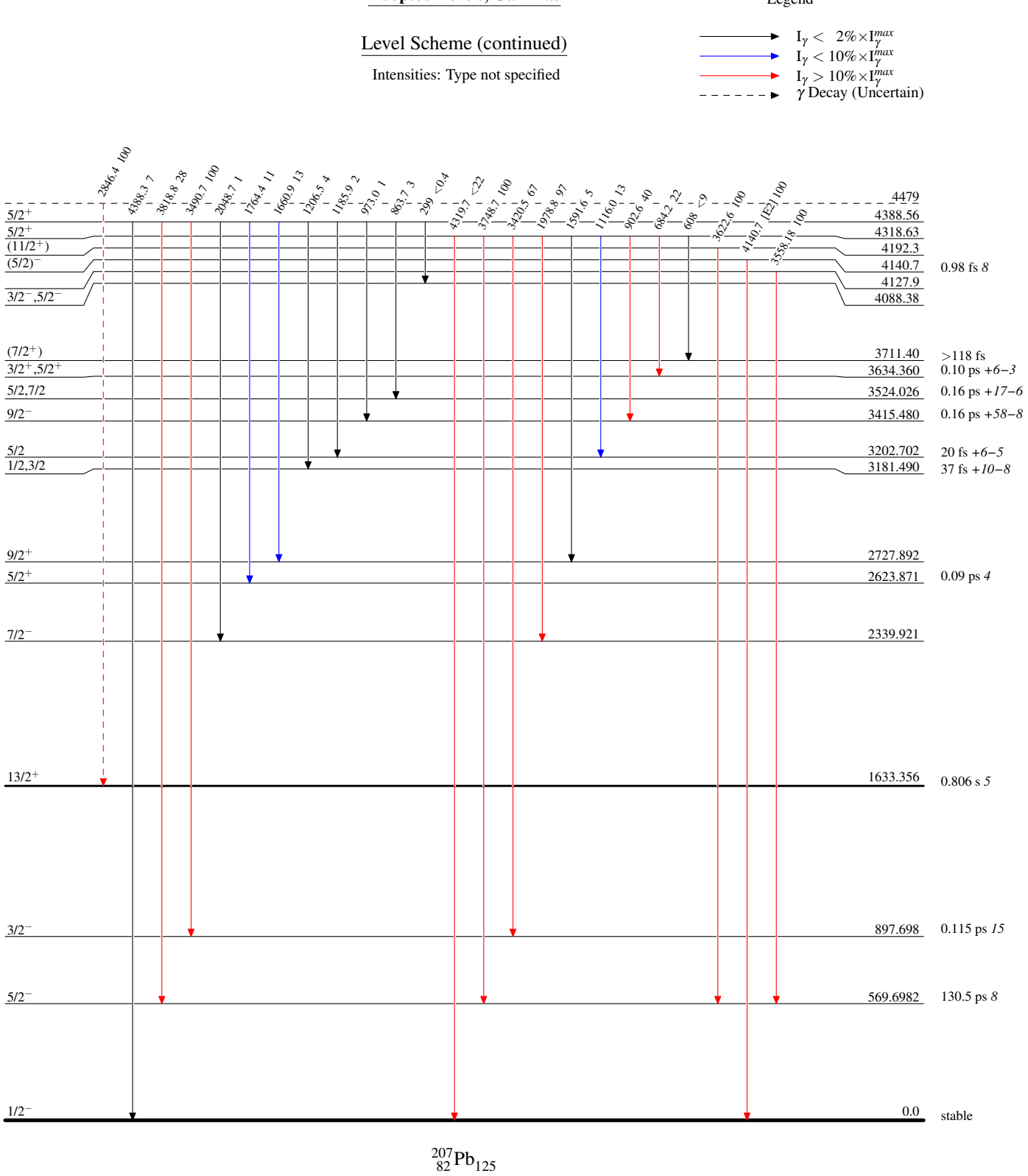


$^{207}_{82}Pb_{125}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



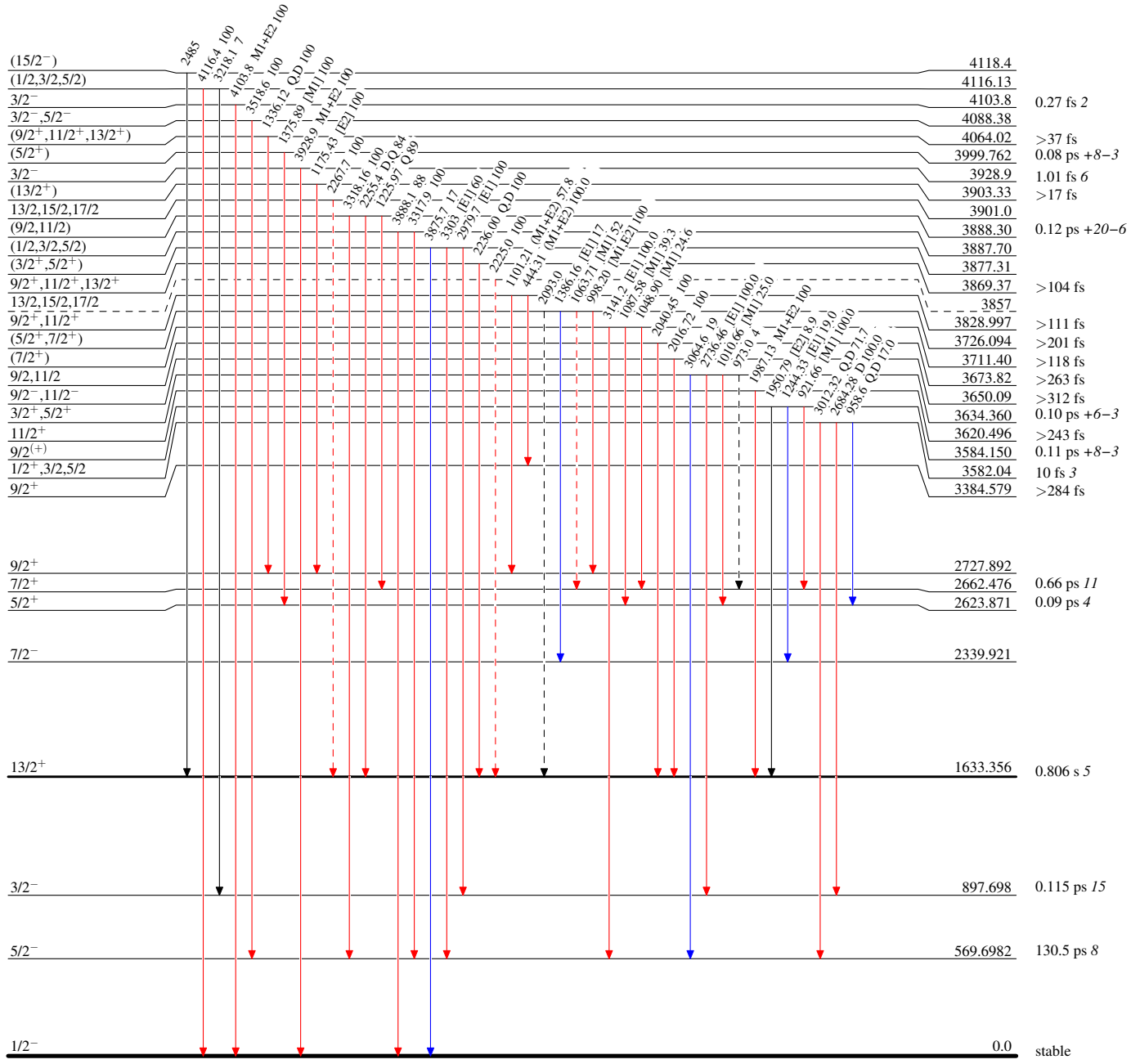
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)

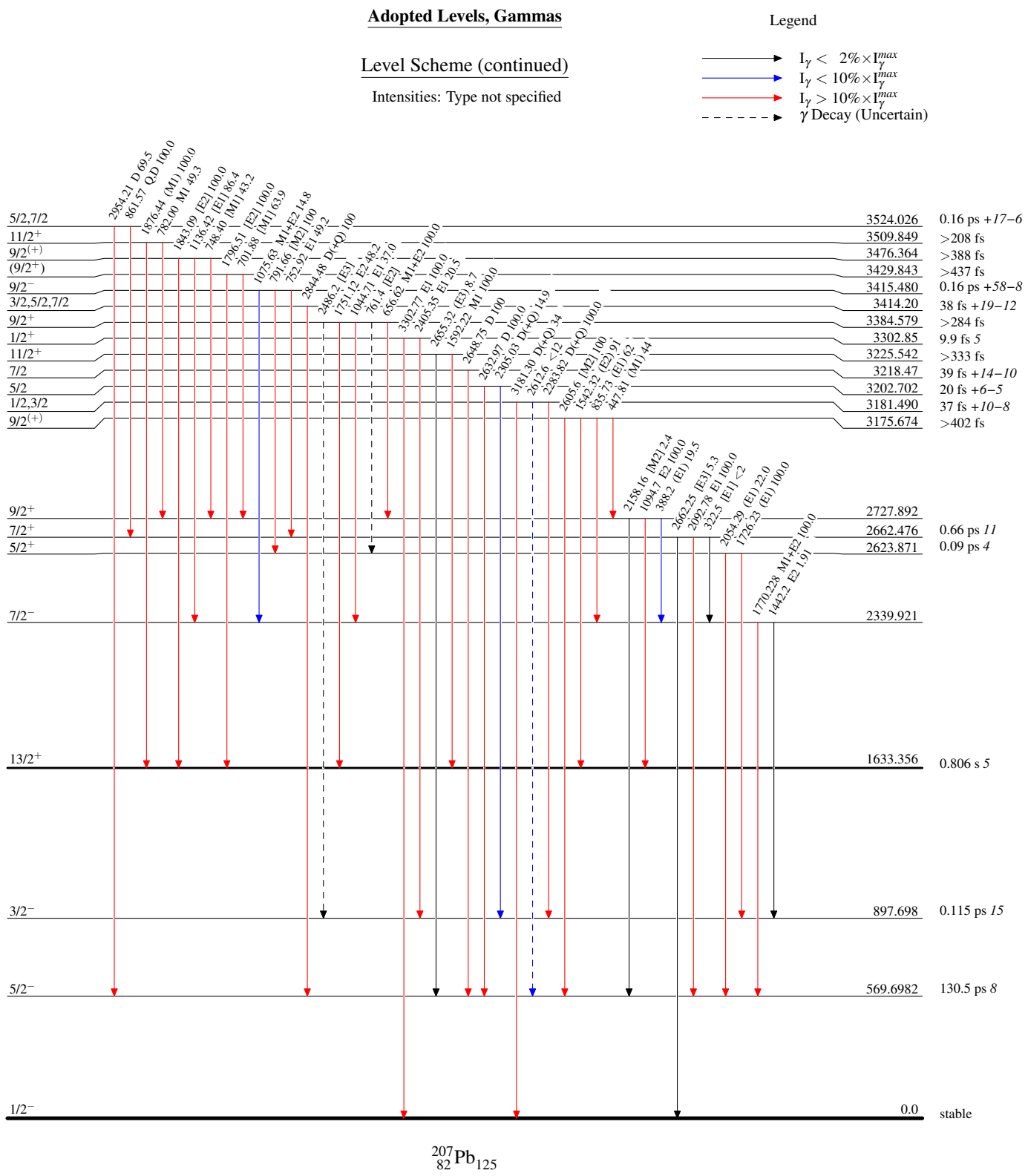


$^{207}_{82}Pb_{125}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

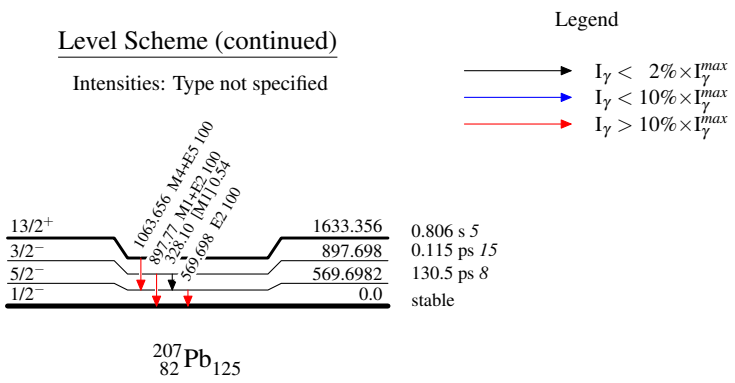


$^{207}_{82}Pb_{125}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified



$^{207}_{82}Pb_{125}$